Statesman

OWNER MANUAL

A Word from

—General Motors

This manual has been prepared to acquaint you with the operation and maintenance of your vehicle and also to provide important safety information. We urge you to read the manual carefully and follow the recommendations contained to ensure that you enjoy trouble-free operation from your vehicle.

Your GM Dealer has the trained personnel and specialized equipment to properly service your new vehicle, therefore we suggest that you arrange with him to have the maintenance requirements performed in accordance with the Guardian Maintenance Plan provided.

We take this opportunity to thank you for choosing a General Motors product and to assure you of our continuing interest in your motoring pleasure and satisfaction.

Statesman

OWNER MANUAL

TABLE OF CONTENTS

SECTION		PAGE
1	SAFETY NOTES	2
2	SERVICE INFORMATION	6
3	BODY EQUIPMENT	9
4	INSTRUMENT PANEL	21
5	DRIVING INSTRUCTIONS	28
6	VENTILATION AND CONTROLS	39
7	TYRES AND WHEEL CHANGING	45
8	TRAILER AND CARAVAN HAULING	54
9	APPEARANCE POINTERS	58
10	GENERAL MAINTENANCE	64
11	MAINTENANCE CHARTS	77
12	SPECIFICATIONS	81
13	AUTHORISED GM DEALERS	87
14	INDEX	95

IMPORTANT SAFETY TIPS TO HELP YOU ENJOY THE MAXIMUM IN SATISFACTION AND SAFETY

All information, illustrations and specifications contained in this manual are based on the latest product information available at the time of publication approval. The right is reserved to make changes at any time without notice.

Issued by Service Division
GENERAL MOTORS-HOLDEN'S
SALES PTY. LTD.

June, 1973
Part No. 9933223
HQ Series

SECTION—1

SAFETY NOTES

SAFE DRIVER CHECK LIST

- Be sure you are physically and mentally alert to drive.
- Adjust seats and mirrors for clear vision and safe handling.
- Buckle up your Seat Belt for safety.
- Check that all window areas are clean.
- Observe weather and road conditions . . . and drive accordingly.
- Look around before driving away from where you are parked.

SAFE DRIVERS OBSERVE ALL TRAFFIC LAWS . . . MAKE SAFE DRIVING A HABIT

HIGHWAY SAFETY DEPENDS ON –

1 YOU, THE DRIVER

2 THE CONDITION OF YOUR VEHICLE

3 THE TRAFFIC AND HIGHWAY CONDITIONS

. . . BE SURE YOU UNDERSTAND ALL THREE!

REMEMBER

PROPER OPERATION, PERIODIC MAINTENANCE AND SAFETY INSPECTIONS HELP PROVIDE

- Economical operation of your vehicle
- Safety for you and your passengers
- Dependable transportation

The following 10 items need regular and conscientious attention in the interest of safety.

If they require rectification your Authorised GM Dealer will assist you.

- ✓ BRAKES
- ✓ ALL LIGHTS
- ✓ SEAT BELTS
- ✓ STEERING AND WHEEL ALIGNMENT
- ✓ TYRES—CONDITION & PRESSURES
- ✓ EXHAUST SYSTEM
- ✓ GLASS AREAS
- ✓ WINDSHIELD WIPERS AND WASHER
- ✓ REAR VISION MIRRORS
- ✓ HORN

SAFETY MEANS REGULAR INSPECTIONS

SAFETY INDEX

	Page
Battery Gas Caution	73
Brakes	35-36
Bulb Replacement	74-75
Door Locks	11
Emergency Starting	38
Emergency Towing	38
Exhaust Gas Warning	44
Fabric Cleaning Caution	59
Fuse System	76, 85
Limited Slip Differential	37
Loose Load and Articles	4
Petrol Fumes	44
Power Brakes	36
Power Operated Windows	18
Power Steering	37
Radiator Cap Caution	71
Rear Vision Mirrors	17
Seat Belt Adjustment	14-16
Tyre Inflation Pressures	47
Wheel Changing and Jack Operation	50-53
Windshield Wipers and Washer	18, 26-27

ENERGY ABSORBING STEERING COLUMN AND STEERING WHEEL

The Energy Absorbing Column (E.A.C.) was pioneered by General Motors and is fitted to your vehicle in the interests of greater protection to the driver in the case of accident or collision.

The steering wheel also has been designed as an integral part of this energy absorbing system.

FULL WIDTH ENERGY ABSORBING INSTRUMENT PANEL

The instrument panel of the vehicle has been designed for your safety. In the event of a collision, any impact you or your passengers may suffer by being thrown against the instrument panel pad will be minimised by the progressive collapse of the panel pad structure.

FUSIBLE LINK

In order to reduce the possibility of a fire, whether due to electrical causes or an accident, the wiring harness is protected by the inclusion of a fusible link, located in the harness next to the starter motor. In case of short circuit, the link will melt internally, disconnecting the battery by the fusing action. The encasing insulation has been specially designed to withstand the temperature and to contain the fused wires. Thus the fusible link provides a combined fuse and fire protection feature.

STEEL CARGO BARRIER

This safety feature has been incorporated and designed so that in the event of a collision, articles stowed in the luggage compartment are prevented from being thrown into the passenger compartment and causing possible injury to passengers.

__CAUTION:__ LOOSE LOAD AND ARTICLES.

DO NOT LEAVE LOOSE ARTICLES ON THE REAR WINDOW SHELF.

THIS ACTION WILL PREVENT LOOSE ITEMS FROM BECOMING DANGEROUS PROJECTILES IN THE EVENT OF A SUDDEN STOP OR COLLISION.

SEAT BELTS — FOR FULL HARNESSING INSTRUCTIONS REFER TO SECTION 3.

LAMINATED WINDSHIELDS AND LAMINATED (WITH TINTED UPPER BAND) WINDSHIELDS, ARE ALSO AVAILABLE.

REFER TO SECTION 6 FOR VENTILATION NOTES AND MAINTAINING AN EXCHANGE OF AIR IN THE VEHICLE.

DOOR LOCKS AND DOOR HANDLES

The doors feature fork-type door locks and flush fitting exterior door handles. In the event of a vehicle rolling over, as the result of an accident, the chances of the door opening are reduced due to the protection given by the flush fitting exterior door handles.

The instrument panel compartment door lock is also of the fork design, thereby reducing the chances of accidental opening in the event of a collision.

IGNITION AND STEERING LOCK

The safety ignition and steering lock is located at the upper right section of the steering column. The steering wheel may be locked in any position desired from "full lock" to "straight ahead" position. (Refer Section 3.)

SAFETY FEATURES INCLUDE:

Brake Warning Light.

Motorised Deluxe Heater/Demister.

Energy Absorbing Steering Column and Steering Wheel.

Tandem Brake Master Cylinder, Dual Hydraulic Circuits.

Seat Belts for all Passengers.

Spring Loaded Knock-Out Type Internal Rear Vision Mirror Mounting.

Shatter-Proof Rear Vision Mirror.

External Rear Vision Mirror (Driver's Side Door).

Safety Flanges on both Rims of Road Wheels (Rally Wheels — Outer Rim Only).

Low Profile Section Tyres.

Toughened Windshield Glass with Modified Zone.

Safety Glass Windows.

Glare Reduced, Safety Padded, Full Width Energy Absorbing Instrument Panel.

Recessed Instruments and Instrument Panel Controls.

Glare Reduced Instruments and Controls.

Low Profile Window Regulator Handles.

Sun Visors — Energy Absorbing and Flush Fitting.

Safety Type Door Locks — Front and Rear Handles Free Wheel.

Twin Dual-Jet Windshield Washer Nozzles.

Articulated Windshield Wiper Blade Arm (Driver's Side).

2-Speed Windshield Wipers with Glare Reduced Surfaces.

Back-Up Lamps.

Fusible Link in Wiring Harness.

Steel Cargo Barrier.

Anti-Theft Steering Lock — Combined with Ignition Switch.

Underslung Fuel Tank with External Lines.

Flush Fitting Exterior Door Handles.

Rear Side Marker Lights.

Driver's Side Floor Mounted Parking Brake Lever.

Parking Brake Warning Lamp.

Skid Type Windshield Header Panel.

Lane Changer Function on Turn Signal Lever.

Thin-Section Front Body Pillars and Large Windshield for Excellent Forward Vision.

Flow-Through Ventilation System.

Safety Type Steel Door Hinges.

Brake Proportioning Valve incorporated in Hydraulic System.

SECTION—2

SERVICE INFORMATION

NEW VEHICLE PRE-DELIVERY

Before delivery, your GM Dealer has made a final inspection of your new vehicle in accordance with the procedure required by General Motors-Holden's Sales Pty. Ltd. This Pre-Delivery preparation will ensure that the vehicle is ready to give satisfactory performance from the beginning of its operational life.

The Dealer's interest in you and your vehicle not only includes Pre-Delivery preparation, but continues during your ownership. If shortly after delivery, you encounter some unexpected item requiring adjustment, you should return your vehicle to the Selling Dealer for correction. As correction of this nature is part of the Selling Dealer's responsibility, he will be most happy to make the necessary adjustments.

Should you be in transit and a situation arises which affects the operation of your vehicle, do not hesitate to approach the nearest authorized GM Dealer for assistance.

WARRANTY PROTECTION

On delivery of your new vehicle you were presented with a Warranty Certificate.

The Warranty Certificate embodies the Owner Service Policy and includes for your protection an inspection and adjustment coupon. This coupon is provided in order that a general checkover may be carried out at **1 Month or 1,000 Miles (1500 km)** thus ensuring that your vehicle is performing satisfactorily.

The owner enjoys the full protection of the Warranty. There is no charge to the owner for labour or material should parts be required due to defective material or workmanship, during the Warranty period. This Warranty protection shall not apply to any vehicle which has been subject to misuse, negligence or accident. Full details of the Warranty coverage are itemised on the Warranty Certificate.

BE CERTAIN TO CARRY THE WARRANTY CERTIFICATE IN THE INSTRUMENT PANEL COMPARTMENT OF YOUR VEHICLE AT ALL TIMES.

OVERLOADING AND THE WARRANTY — REFER PAGE 82.

GUARDIAN MAINTENANCE PLAN —OWNER GUIDE

Your Dealer is equipped to render complete Guardian Maintenance Service. We recommend that you take advantage of his modern equipment and trained personnel. Lubricants are less expensive than repair bills. Consequently, it is important that the proper grade of lubricants be used in accordance with the time and distance schedule.

The Owner Guide is provided to show the recommended frequencies for maintenance under normal operating conditions for a period up to 60 Months or 60,000 Miles (100,000 km). These recommendations cover items which should be checked, inspected, adjusted, lubricated or replaced at the specified time or mileage intervals. The services are the owner's responsibility and they should be carried out by an authorized GM Dealer. A charge at the Dealer's retail rate will be made, for the time quoted in the owner Guide, plus any material used. On completion of the service, the Owner Guide is stamped by the Dealer in the space provided at the recommended time/distance.

If the services are carried out at the prescribed time or distance intervals, servicing expense will be kept to a minimum. Additional services may become necessary as mileage accrues; however, during the regular visits to your GM Dealer for Guardian Maintenance, you will be advised of any other work that may be necessary to keep your vehicle in first class condition.

Should you be away from home when the Guardian Maintenance Services become due, you should arrange to have these carried out by an authorized GM Dealer in the area.

Continuous use of the Owner Guide not only ensures that the car is maintained in first-class condition, but provides visual evidence of it. When the time comes for you to trade your car, the Owner Guide, stamped by an authorized GM Dealer, confirms that the vehicle has received regular maintenance, and this fact enhances its trade-in value.

THE OWNER GUIDE DOES NOT APPLY TO EXPORT VEHICLES.

OWNER RELATIONS

The satisfaction and goodwill of all owners of General Motors products are of primary concern to your Dealer and General Motors. Normally, any problems that arise in connection with the sales transaction or the operation of your car will be handled by your Dealer's Sales or Service Departments. It is recognized, however, that despite the best intentions of everyone concerned, misunderstandings will sometimes occur. If you have a problem that has not been handled to your satisfaction through normal channels, we suggest that you take the following steps:—

Step One — Discuss your problem with a member of dealership management. Frequently, complaints are the result of a breakdown in communications which should be quickly resolved. If the problem has already been reviewed with the Sales Manager or Service Manager of the Dealership, contact the General Manager, or the Dealer himself.

Step Two — When it appears that your problem cannot be readily resolved by the dealership without additional assistance, the matter can be brought to the attention of the Zone Service Department in your State:

LETTERS SHOULD BE ADDRESSED TO "The Zone Service Manager" at one of the addresses shown.

When writing to the Zone Service Department it greatly assists if you provide the following information:—

YOUR NAME, ADDRESS, TELEPHONE NUMBER
*VEHICLE MODEL and V.I. No.
DEALER'S NAME AND LOCATION
*VEHICLE DELIVERY DATE AND ODOMETER READING
NATURE OF PROBLEM

***N.B.** THIS INFORMATION IS READILY AVAILABLE FROM YOUR WARRANTY CERTIFICATE.

QUEENSLAND
General Motors-Holden's Pty. Ltd.,
Box 728, G.P.O.,
BRISBANE, QLD. 4001.

NEW SOUTH WALES
General Motors-Holden's Pty. Ltd.,
Box 4239, G.P.O.,
SYDNEY, N.S.W. 2001.

VICTORIA
General Motors-Holden's Pty. Ltd.,
Box 161, G.P.O.,
DANDENONG, VIC. 3175.

SOUTH AUSTRALIA
General Motors-Holden's Pty. Ltd.,
Box 96, P.O.,
ELIZABETH, S.A. 5112.

WESTERN AUSTRALIA
General Motors-Holden's Pty. Ltd.,
MOSMAN PARK, W.A. 6012.

Step Three — In the unlikely event that after contacting the Zone Service Department you are not satisfied, you have another avenue of approach which is, to write to **The General Service Manager, General Motors-Holden's Pty. Ltd., P.O. Box 1714, Melbourne, Victoria 3001.**

However, if you contact the Zone or the General Service Manager, please bear in mind that ultimately the problem will be resolved in the dealership, utilizing the Dealer's facilities, equipment, and personnel. It is suggested, therefore, that you follow the above steps in sequence when pursuing a problem.

SECTION—3

BODY EQUIPMENT

Keys and Locks
Front Seat Adjustment
Seat Belts
Rear Vision Mirrors
Windshield Washer and Wipers
Window Controls
Safety Glass
Courtesy Equipment

KEYS AND LOCKS

KEYS

Two different keys are provided with your vehicle (four altogether, two of each type).

'A' KEY— with square head—for ignition/ steering lock and door locks.

'B' KEY— with oval head—for instrument panel compartment, luggage compartment.

The code number for each key is stamped on the 'knock out' insert in the key head. Before placing keys on your key ring, punch out the small insert, bearing the key code number.

Place the insert in a safe place so that if the keys are lost duplicates can be ordered by number from any GM Dealer.

IMPORTANT

When it is necessary to secure personal effects or luggage be sure to lock the instrument panel compartment with the 'B' Key before removing this key from the key set. This safety precaution is necessary when leaving the 'A' Key in the vehicle for servicing facilities or public car parks.

ANTI-THEFT IGNITION/STEERING LOCK

(Refer Section 5 for Starting Procedure)

The combined switch/lock is located on the right side of the steering column housing and has five positions:

ACC : LOCK : OFF : ON : START.

The "A" Key can only be inserted and withdrawn when the barrel is in the 'LOCK' position, at which time the steering wheel is locked and the ignition circuit is inactive.

Operation of the combined lock and its positions, from the rear to the front, is as follows after inserting the 'A' Key:

ACC — 1st Back — The steering wheel remains locked while all electrically powered accessories, such as radio, heater/demister and air conditioner fan, etc., will operate with vehicle standing and engine off.

LOCK — At Insert — Steering wheel is locked and ignition inactive.

NEVER SELECT THIS POSITION WHILE THE VEHICLE IS IN MOTION.

***OFF — 1st Forward —** Steering wheel is unlocked with ignition still inactive.

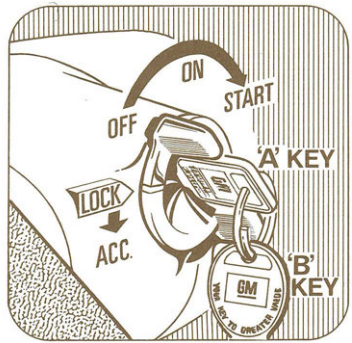
ON — 2nd Forward — Ignition circuit is switched on.

START — 3rd Forward — Starter motor activated to start engine. Key will return to **ON** position when engine starts and key is released.

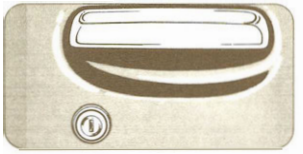
**When turning the key back from the OFF position, the locking barrel must be 'pushed in' in order to pass into the LOCK position.*

SAFETY. When leaving the vehicle unattended, as a safeguard against theft, always remove key from ignition and steering lock. **This may be required by law also.**

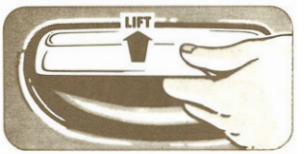
DO NOT FORCE KEY IN OR OUT OF THE LOCK.



DOOR LOCK OPERATION ('A' KEY)



Normal Position

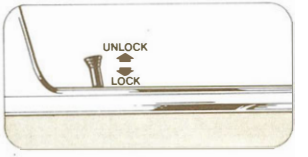


'Lift' Position

OPENING WITH KEY. Both front doors can be unlocked with the key from the outside by turning the top of the key towards the front of the vehicle, before lifting the finger bar to open the door.

OPENING WITH HANDLE. All doors are fitted with safety flush fitting handles with a "vertical lift" finger bar to actuate the door locking mechanism, which will "free wheel" if the internal locking button is still depressed.

Interior Handle



Locking Button

LOCKING FROM THE INSIDE. In the interest of safety, all doors incorporate a "free wheeling" lock mechanism, prohibiting the doors being opened from the outside or inside unless the locking button is first raised.

LOCKING FROM THE OUTSIDE. All doors can be locked from the outside by pressing down the inside locking button while the door is open, then shutting the door with the finger bar in the 'Lift' position.

COMPARTMENT LOCK OPERATION ('B' KEY)

LUGGAGE COMPARTMENT (TRUNK) LOCK. Insert key and turn clockwise to unlock. Due to the counter-balancing action, the lid will spring open a few inches, allowing the operator to lift lid to its fullest extent for the stowing of luggage.

To shut, simply pull the lid to a position several inches above the closed position, then quickly and firmly push downwards to engage the lock.

DO NOT LEAVE THE KEY IN THE LUGGAGE COMPARTMENT LOCK.

INSTRUMENT PANEL COMPARTMENT LOCK. To lock insert the key and quarter-turn anti-clockwise, then withdraw.

To unlock, insert the key and quarter-turn clockwise. The key can then be withdrawn before turning the lock clockwise to allow the door to open downwards.

ENGINE HOOD LOCK AND CATCH. The hood lock is controlled from a knob under the right-hand end of the instrument panel. Pull the knob out to release the lock then push the knob back after the hood has disengaged. The counter-balanced hood can then be opened at the front, by lifting the catch lever located to the right of the centre, when facing the vehicle, under the open end of the hood.

To close, simply lower the hood to a near closed position, then firmly push downwards to fully engage the catch and lock.

PETROL CAP. The petrol cap is located behind the rear licence plate. The licence plate must be swung down in order to gain access. The cap is opened by turning it anti-clockwise, using the tabs provided.

When a locking type fuel cap is fitted, two keys are provided, one being a spare.

COLD WEATHER NOTE: *During cold weather, moisture may freeze in the door locks. In that case, heat the key with a match or pocket lighter and insert it several times in the cylinder until lock is free.*

FRONT SEAT ADJUSTMENT

BENCH SEAT (Fig. 1)

In order to adjust the seat, in relation to the steering wheel and other controls, the seat can be unlocked at the front by moving the locking lever (positioned at the lower front right hand corner) transversely, ACROSS TO THE RIGHT, then apply body pressure which can then move the seat either rearward or forward, as required. The seat mechanism will lock again when the locking lever is released. To ensure that the locks have fully engaged, try to move the seat slightly back and forth.

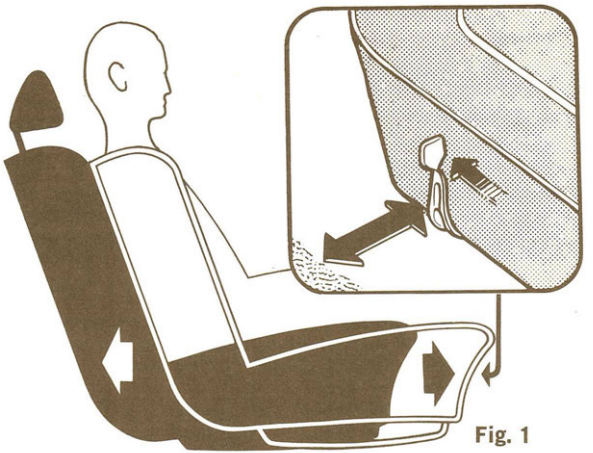


Fig. 1

BUCKET SEATS (Fig. 2)

FIXED BACK. Where fitted, only the locking lever for controlling forward and rearward adjustment is provided at the right-hand front corner of each seat. Refer to the Bench Seat statement for operating instructions.

RECLINING BACK. As well as the locking lever at the right-hand front corner, for controlling forward and rearward adjustment, the angle of the seat-back can be changed by using a lever mounted on the outboard side of each seat, protruding from the hinge assembly. There is a spring loading that causes the seat-back to fold forward when the catch is released after pushing the catch lever down. The adjustment angle is regulated by simply depressing the catch lever when it is desired to change the seat-back angle. On releasing the catch lever, ensure the catch mechanism is operating by carefully resting against the seat.

When it is required to fold the seat-back forward, hold down the catch lever while the seat-back is moved.

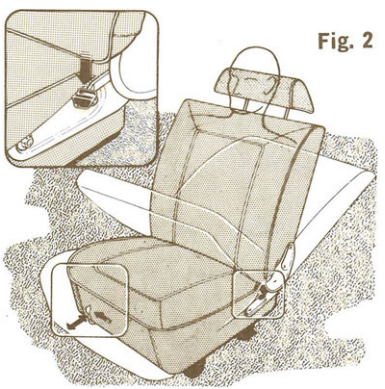


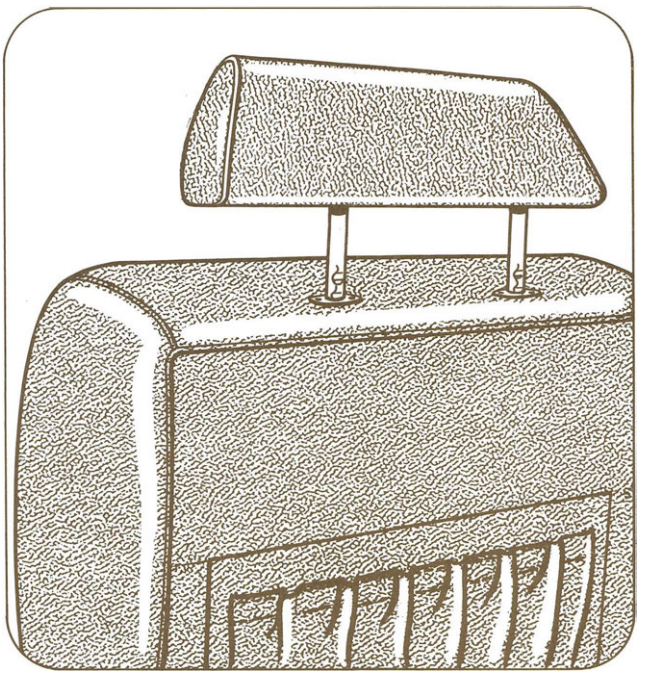
Fig. 2

HEADRESTRAINT

This safety device is not intended to be used as a head-rest, it is fitted solely for the purpose of reducing possible injury that may result from a "whip-lash" neck movement following a collision.
Do not operate the vehicle with head restraints removed.
The most effective position for the head-restraint is when the top surface is level with the top of your ears.
The support bars are notched at the back, so that the head-restraint can be retained in a number of height settings by spring clips, set into the seat construction.
The upper-most position, (beyond which the head-restraint would not properly be retained), is when the fifth notch, (5th) will be just visible.
Do not use the head-restraint above the uppermost position.

FRONT SEAT REPOSITIONING

Certain people, due to their lack of height, may consider it advisable to have the front seat repositioned. It is possible to have the seat moved forward 1 inch on the seat mountings, giving decreased leg room. It is suggested that should the necessity arise, this matter be discussed with your GM Dealer.



GENERAL NOTES ON SEAT BELTS

Various State regulations require Seat Belts to be fitted as standard equipment; therefore, this section should be carefully studied.

NEVER USE THE SAME SEAT BELT FOR MORE THAN ONE PERSON AT ANY GIVEN TIME.

WARNING — SEAT BELT USAGE

Seat belts are designed to restrain the skeletal structure of the trunk, and should be worn across the pelvis, or the chest and shoulders, or all three; compression of the abdominal area must be avoided.

Seat Belts should be adjusted to fit as firmly as possible, consistent with comfort, to provide the protection for which they have been designed. An unduly slack belt will greatly reduce the protection afforded to the wearer as also will a twisted belt.

The buckles of Lap/Shoulder Combination belts must be located at or below the wearer's hip.

It is essential to scrap the entire assembly after it has been used in a severe impact even if damage to the assembly is not obvious.

CARE OF SEAT BELTS

Keep the belts clean and dry. Clean with a mild soap solution and lukewarm water. Keep sharp edges and damaging objects away from belts.

Periodically, inspect the belts, buckles, and anchorage points. Damage or fraying that could lessen the effectiveness of the system should be eliminated by replacing the belt assemblies. Do not bleach or dye the belts since this can cause severe loss of strength as also will contamination of the webbing with polishes, oils and chemicals — particularly battery acid.

RELEASING BELTS — TO RELEASE THE BELTS, SIMPLY DEPRESS THE RELEASE TAB OR BUTTON LOCATED IN THE CENTRE OF THE BUCKLE.

LAP/SHOULDER BELTS FRONT SEAT : NON-RETRACTOR

NOTE: *Lap/Shoulder Combination Belts are fitted to all outboard positions, for both front and rear passengers.*

Where the Combination Belt becomes twisted, firstly, flatten out the lap section from the outer lower mounting up to the tongue, then, rotate the upper mounting to untwist the shoulder section.

FRONT BELT — TONGUE STOWAGE

Stowage of the outer section with the tongue is provided for front seat belts by a hook positioned on the door pillar, next to the seat-back, above the belt upper mounting point.

This hook location assists in stopping the belts from being caught in the door openings and becoming tangled.

BUCKLE STOWAGE: NON-RETRACTOR

(a) In vehicles equipped with a floor console or seat separator, seat belt buckles, when not in use, should be stowed in the compartment provided.

(b) To fit the buckle correctly into the stowage compartment, the buckle should be held by the hand nearest the console with the release tab uppermost, then insert the buckle onto prongs set in the compartment, with the release tab facing inwards to the centre.

(c) To withdraw, simply grasp the buckle and pull out.

BELT ADJUSTMENT: NON-RETRACTOR

(a) Adopt a satisfactory seating position. An adjustment of the front seat may be needed.

(b) Bring the metal Tongue on the Combination Belt across the body so that the metal Tongue can be engaged in the buckle.

(Adjustment, if required, of the Tongue position will necessitate releasing of the Belt Grip, which may be on the outer lap section or on the upper shoulder section. The belt grip has only to be turned back to release the length required, then the belt can be fed through the tongue loop to the other section.)

(c) SNAP home the Tongue into the Buckle.
(On some belts adjustment of the Buckle position to meet the metal Tongue, can be carried out by turning the Buckle away from its Belt, and pulling the Buckle forward or pulling the free end of the Buckle Belt.)

(d) Finally the Combination Belts should then be tightened by repeating the adjustment procedure described in (b) above.

LAP/SHOULDER BELTS

FRONT SEAT — AUTOMATIC RETRACTOR

GENERAL NOTES

This type of seat belt system allows the wearer to move bodily while the seat belt is fastened. The retractor lock mechanism is only activated by sudden changes of vehicle speed or vehicle direction, as in the case of firm brake application or vehicle impact during an accident.

The effectiveness of the locking mechanism's operation can be gained by allowing the body to be restrained only by the belt during firm application of the vehicle brakes, under appropriate conditions.

FITTING INSTRUCTIONS

Hold the metal tongue, which slides on the belt, with the outer hand; then draw the belt across the body until the tongue can be engaged in the buckle, using the inner hand to hold the buckle.

After fastening, 'settle' the belt by running a hand under the belt, starting at the outer waist — leg area, then across to the tongue and up the shoulder section. This will feed back unwanted belt length to the retractor.

REAR SEAT — LAP/SHOULDER COMBINATION BELTS

NOTE: When fitted at the rear, adjustment of the upper shoulder section of the belt only is possible, the buckle belt being of fixed length.

BELT STOWAGE

When not in use, these belts should be kept with the tongue latched into the appropriate buckle.

REAR BELT ADJUSTMENT (Fixed Length Buckle Belt)

(a) Adopt a satisfactory seating position.

(b) Bring the metal tongue on the combination belt across the body so that the tongue can be inserted into the buckle. (Adjustment if needed may require a partial turn towards the outer (door) side in order to manipulate the belt grip, positioned on the upper section of the shoulder belt. Turn back the belt grip to the rear and then pull the lower belt to lengthen, or upper belt to shorten.)

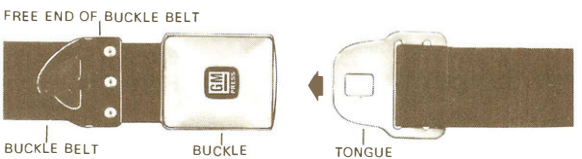
(c) Snap home the tongue into the buckle. (Several attempts may be needed to ensure that the best adjustment has been made.)

LAP TYPE SEAT BELTS — CENTRAL POSITIONS

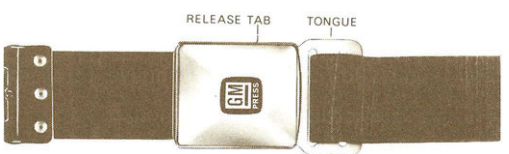
NOTE: A firm low position across the hips is essential in order that the force exerted by the lap belt in a collision may be spread over the strong hip bone structure and not across the soft abdominal area.

STOWAGE

When not in use these belts should be kept with the tongue latched into the appropriate buckle. This will also make buckle selection for the lap/shoulder belts simpler.



Items of reference before fastening the Seat Belt.



Items of reference after fastening and for the release of the Seat Belt.

(a) Adopt a satisfactory seating position.

(b) Bring the metal Tongue across the body and SNAP home the Tongue into the Buckle. Adjustment of the Buckle position can be carried out after the Buckle has been lifted away from the belt before pulling
(a) the Free End of the Buckle Belt to SHORTEN or
(b) the Buckle to LENGTHEN.

(c) FINALLY — CHECK THE FIT and ADJUSTMENT.

REAR VISION MIRRORS

INTERNAL REAR VISION MIRROR

The internal rear view mirror is shatterproof and is mounted on the safety type 'skid' windshield header bar. The mounting incorporates a spring loaded attachment which will allow the mirror and its mounting to be knocked out as a result of accidental impact, thus lowering the chance of injury.

At the lower end of the mounting arm there is a pivoted arm with a ball end which enables the mirror to be raised or lowered while still maintaining the same angle setting or to prevent obscuring forward vision.

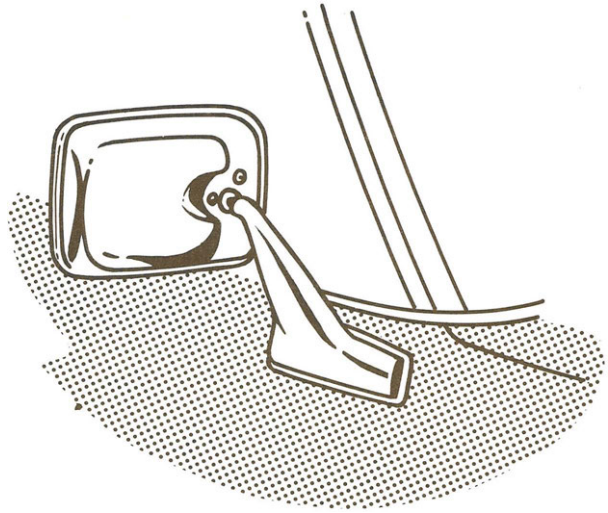
With the prismatic type anti-glare mirror fitted, a control lever on the lower edge of the mirror enables an anti-glare reflector to be used during night driving, thus eliminating headlight glare from following vehicles.

During normal daylight operation, the lever should be set forward.

During night time operation, in order to reduce the glare of the headlights from following vehicles, move the lever rearward.

EXTERNAL REAR VISION MIRROR — MANUAL TYPE

Mounted on the outside of the driver's front door, is a glare-reduced mirror that can be adjusted by means of a ball type swivel joint, thus providing the driver with a means to assist in observing traffic which may be about to pass or is in the adjacent traffic lane. The mirror is so designed that, should the driver inadvertently steer his vehicle too close to an obstruction or pedestrian, the mirror will deflect out of harm's way. Adjustment of this mirror should be correct only when the driver's head is in the normal driving position, otherwise the purpose of the mirror is negated.



EXTERNAL REAR VISION MIRROR — REMOTE CONTROL TYPE

Where fitted, this mirror for the driver's door, is controlled by the stalk that is located at the top front area on the inside of the driver's door.

The angle of the mirror can be controlled by moving the stalk. The change of angle is in the same direction as the stalk movement. When selecting the most suitable angle for the mirror, ensure that the driver's head is in the normal position for driving, then adjust the mirror angle to suit.

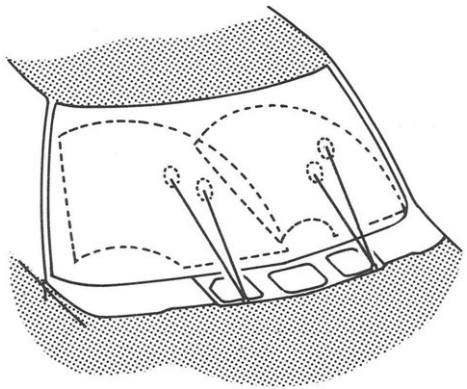
WINDSHIELD WIPER AND WASHER

WIPER SYSTEM

The driver's side wiper arm features an articulated control mechanism so that the unwiped area is reduced to a minimum in the area of the windshield pillar nearest the driver's head.

WASHER SYSTEM

A feature of the windshield washer system is the use of two twin jet nozzles giving a spread of washer fluid, which, while being sprayed onto the windshield, improves the rate and effectiveness of windshield cleaning. The washer pump which is an automatic pulse type is integrated with the wiper motor. Control of wiper and washer operation is via a conveniently located push button washer, sliding wiper control, located on the instrument panel. Refer Section 4 for operating notes.



WINDOW CONTROLS

SIDE WINDOWS — MANUAL OPERATION

All door windows are lowered or raised by use of the low profile window regulator handles. These are fitted with safety designed P.V.C. knobs.

POWER OPERATED WINDOWS

Where this option is fitted, the door window operating motors are connected through the ignition switch so that they cannot be operated unless the key is in the ON position. A master switch group for the windows is fitted on the arm-rest of the driver's door. On other doors, a separate single switch is fitted in the door arm-rest and allows individual control.

WINDOW SWITCH TAB OPERATION. Fitted in Arm Rest.
To Raise — Push outwards — towards door.
To Lower — Push inwards — towards operator.

WINDOW SWITCH TAB OPERATION. Fitted in Trim Panels.
To Raise — Push upwards — towards window.
To Lower — Push downwards — towards floor.

HEATED REAR WINDOW

Where fitted, the heated rear window enables removal of any water condensation on the inside of the glass by evaporation, due to the heating action of the conductive strips adhered to the inside surface.

The switch is located on the right side of the instrument cluster and is marked 'DEFOG'. It will only operate when the Ignition switch is 'ON' and a green light built into the switch is lit when the rear window is being heated.

CAUTION: Metal and/or sharp objects should not be left on the shelf under the window in case damage occurs to the conductive strips.

SAFETY GLASS

The glass of all windows that surround the driver and passengers is of a toughened safety type.
In the event of breakage, toughened glass fractures into small particles across its whole area.

The toughened windshield glass incorporates an additional safety feature in the form of a "Modified Zone" located at eye level directly in front of the driver. This is an oval area approximately 17.5″ wide by 7″ deep. Should the glass shatter, your driving vision is not greatly impaired, due to the larger particle size in the modified zone than the surrounding area, thus allowing sufficient vision to guide your vehicle to a safe stop.

Safety plate glass windshields with a modified Safety Zone can be identified by an arrow that indicates the side on which the Modified Zone is located.

It is quite possible for the glass to be struck by some object without the owner being aware of it — whilst the vehicle is either in motion or stationary — and not until some time later, owing to delayed reaction, does it result in the glass shattering.

GM experience is that the chance of a glass shattering from causes other than being struck by some object is remote.

Furthermore, windshield and rear window safety glasses are sealed into the bodywork openings by a special adhesive sealing compound that also assists in insulating against road shocks.

LAMINATED WINDSHIELDS, AND LAMINATED WITH TINTED UPPER BAND WINDSHIELDS, ARE ALSO AVAILABLE.

COURTESY EQUIPMENT

APPLICATION

The fitment of the following equipment described is subject to the model or option selected and therefore, all items may not be fitted to each vehicle.

COAT HOOKS

Coat Hooks are located above the rear door openings.

ASSIST STRAPS

Assist straps are press stud fastened to the quarter panel. By simply pulling the bottom of the strap, these can be released for use.

SUN VISORS

The sun visors can be swung around if desired to prevent sun glare from the side windows as well as the windshield.

ASH TRAYS — Removal and Replacement

Swivel Type
This type can be removed by swivelling the tray out, then pulling it clear from the spring loaded balls, withdrawing it from the aperture. To replace, reverse the procedure.

Insert Type
To remove, open the lid of the ash tray and use the lid to pull out the ash tray complete. To replace, reverse the procedure.

Tilt-Open Type
To remove, open ash tray, depress the spring loading tab in centre and carefully withdraw. To replace, reverse the procedure.

CIGAR LIGHTER. Refer to Section 4, Instrument Panel.

VANITY MIRROR

Fitted inside the instrument panel compartment, it is designed to swing down into view when required by being pulled forward.

ARM-RESTS — BENCH SEATS

Recessed into the seat back of both front and rear seats, they can be pulled forward from the top.

SEAT SEPARATOR

Used between bucket seats, the top is hinged to allow access to a stowage compartment for small articles.

FLOOR CONSOLE

A container recess is underneath a hinged flap situated in front of the shift lever.

COURTESY LIGHTING — DOOR OPERATED

Dome Lamp — Custom and de Ville
Apart from the control at the lights switch, this interior lighting is activated by the courtesy lamp switches of all doors.

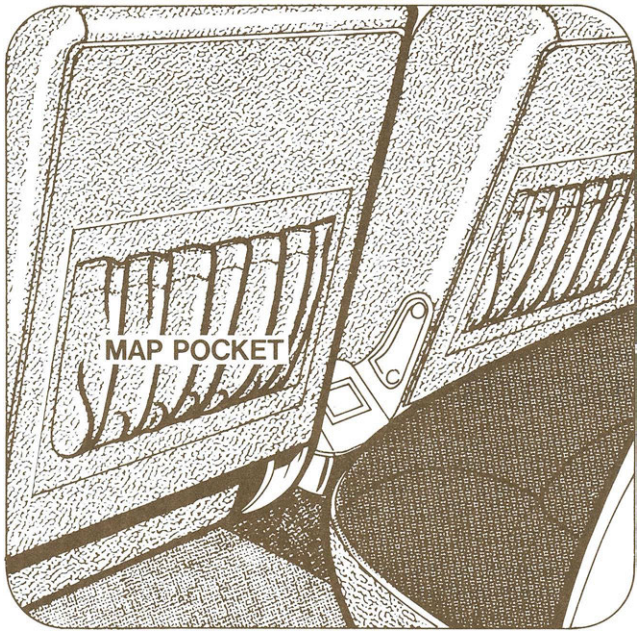
Front Footwell and Rear Quarter Lamps — de Ville
Apart from the control at the lights switch, this interior lighting is activated by the courtesy lamp switches of all doors.

Instrument Panel Compartment Lamp
Lamp automatically operates when compartment door is opened.

Luggage Compartment Lamp
Lamp automatically operates when lid is opened.

MAP POCKETS

Located on the back of the seat-back-rest, these pockets provide a convenient stowage position for light flat articles, such as maps, newspapers, magazines, etc.



REAR VIEW OF NORMAL DEVILLE FRONT SEAT

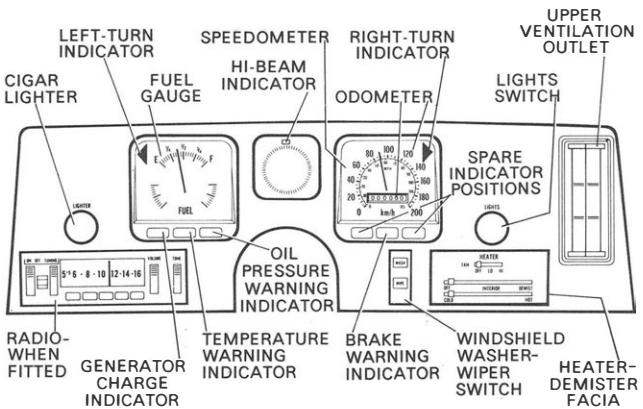
SECTION—4

INSTRUMENT PANEL

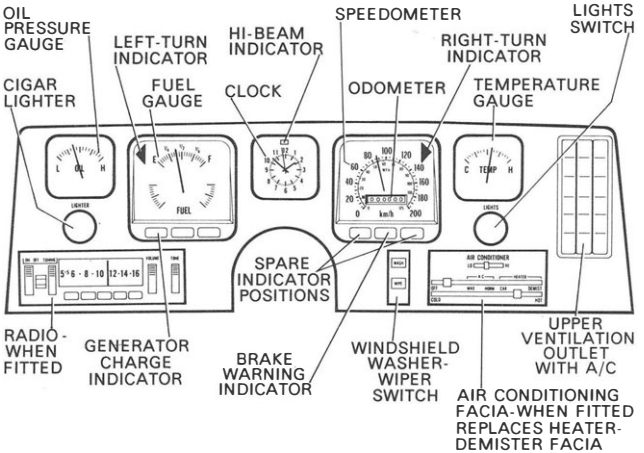
Gauges
Indicator Lights
Turn Signal Operation
Ignition/Steering Lock
Lights
Choke — Manual Control
Windshield Wipers and Washer
Cigar Lighter
Horns
Heater and Air Conditioning Controls
Radio
Driving Controls

As you sit in the driver's seat of your new vehicle, you'll find all driving instruments and gauges directly in front of you, conveniently located for quick, easy viewing. These instruments tell you important things about your vehicle's performance and should be observed regularly.

STATESMAN — CUSTOM



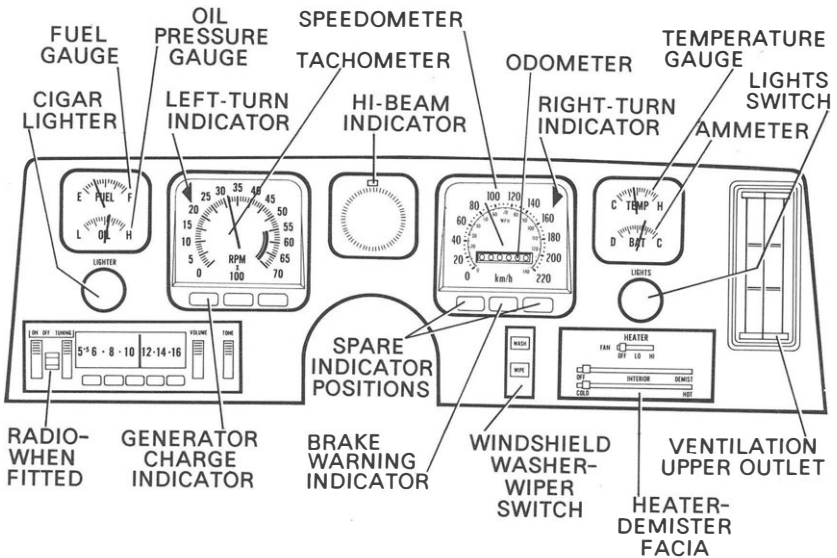
STATESMAN — DE VILLE



N.B. Additions to the instrument panel, depending on the options fitted can be

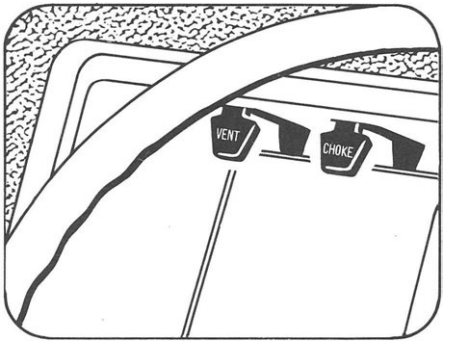
1. **A front-to-rear speaker balance control knob.**
2. **A power operated antenna switch.**
3. **A heated rear window switch.**

SPORTS INSTRUMENTATION



N.B. Additions to the instrument panel, depending on the options fitted can be

1. **A front-to-rear speaker balance control knob.**
2. **A power operated antenna switch.**
3. **A heated rear window switch.**



Illustrated is the vent and choke control grips which are in the left hand top corner of the instrument shroud. The other vent control is in the top right hand corner.

Where air conditioning is fitted the vent controls are deleted. Similarly if a V8 engine is fitted the choke control is deleted.

The following information applies to Gauges, Indicator Lights and Controls in the Instrument Panel without regard to the combinations or sets which may apply to particular models or options (refer previous illustrations)

GAUGES

SPEEDOMETER & ODOMETER. The speedometer face incorporates the odometer digits to show the distance travelled.

The standard speedometer dial is calibrated from 0 to 125 miles per hour (m.p.h.) and 0 to 200 kilometres per hour (km/h).

Where Sports instrumentation is fitted the speedometer is graduated from 0 to 140 in miles per hour (m.p.h.) and 0 to 220 kilometres per hour (km/h).

FUEL. The gauge is electrically operated to indicate the proportionate amount of fuel contained in the fuel tank. The gauge is activated when the ignition switch is turned to the ON position.

Red graduations on the left indicate that fuel is getting low.

OIL PRESSURE. The oil pressure gauge indicates the relative operating oil pressure of the engine lubricating system. When the engine is idling, the oil pressure indicated will be lower than when the engine is running at higher speeds. If the gauge fails to indicate a reading at normal operating conditions, check the engine oil level, if this is correct, have the engine lubricating system checked immediately by an Authorised GM Dealer.

Should the needle move to the red graduations when the engine is running above idle speeds, this indicates low engine oil pressure and warns that attention to the engine lubricating system may be required.

AMMETER. The needle should show a charge towards C at all times with the engine running under normal conditions. If a discharge state is shown (needle towards D), have the electrical system checked for faults.

TEMPERATURE. The gauge is calibrated to indicate the relative operating temperature of the cooling system. If the needle reaches the red section, this is equivalent to a warning light and the necessary action, as stated for Indicator Lights, will apply. (Refer Page 25 of this Section.)

TACHOMETER. The instrument is graduated from 0-70, indicating engine revolutions in hundreds per minute. The section from 55-70 is indicated in RED and engine revolutions should not be permitted to reach this level as serious engine damage may result.

CLOCK. The clock is standard on de Ville or fitted as optional equipment on the Custom.

The clock is electrically energised; the time setting is adjusted by pulling out the knurled knob in the corner of the clock face to engage and rotate the dial hands.

INDICATOR LIGHTS

GENERATOR. When the ignition switch is turned to the ON position, the letters GEN will glow red at the lower left corner of the Fuel Gauge or Tachometer. The light will go out as soon as the generator starts charging. The light will remain on with the engine running only if there is a fault in the charging system or the generator drive belt fails or is slipping.

BRAKE WARNING. All models have a parking brake and foot brake system warning light which displays the word BRAKE with a red light when activated and is located at the lower central position of the speedometer.

When the parking brake is applied and when the ignition switch is in the ON position, the red light will glow until the parking brake is released.

Should the light glow continuously with the parking brake released and the ignition ON after the foot brake has been applied, it indicates that there is a defect in the hydraulic brake system.

Should the warning light glow while driving, after applying the foot brake, stop at the side of the road, braking carefully. Do not proceed until satisfied that cautious progress is possible or that the cause has been located and rectified. Reference should be made to Brake Operation in Section 5.

TURN SIGNALS. The R.H. indicator light is located in the top right-hand corner of the speedometer. The L.H. indicator light is located in the top left-hand corner of the Fuel Gauge or Tachometer.

OIL PRESSURE. *(No light is installed when an Oil Pressure Gauge is fitted.)*

When the ignition switch is turned to the "ON" position, a red light will illuminate the letters OIL at the lower right corner of the fuel gauge. After the engine starts, the warning light will go out after a few seconds, indicating an acceptable operating pressure. If the light remains on after this period, check the oil level, if the level is correct, have the lubricating system checked by an Authorised GM Dealer.

TEMPERATURE. *(No light is installed when a Temperature Gauge is fitted.)*

A red light, located at the lower middle of the fuel gauge, will glow only when the ignition is switched to the START position (i.e. when the engine is being cranked by the starter motor), but will go out when the ignition switch is released to the ON position. This pattern provides a regular check that the warning system is functioning correctly.

Whilst the cooling system of the engine is automatically controlled, there are certain abnormal conditions of operation during which overheating can occur and this indicator provides a warning should these conditions exist. When the light glows red, the engine should be stopped and allowed to cool down. Reference should be made to Section 10 of the Owner Manual regarding the cooling system. Check that no visible leak is apparent from the coolant hoses to the radiator or that the fan belt is slipping or broken.

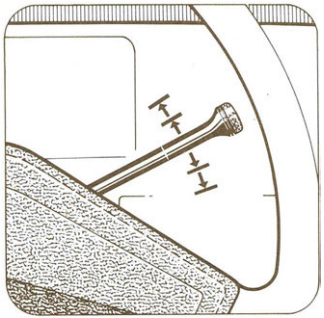
HI-BEAM. When the headlamps are on high beam, a blue light, located at the top centre of the instrument panel, will glow. Refer to Exterior Lighting for operation of Hi-Beam in this Section.

TURN SIGNAL OPERATION

To operate the turn signal (Direction Indicator) lights, the ignition switch should be in the "ON" position.

When the turn signal lever, mounted on the right side of the steering column, is moved up or down, a tell-tale green light will flash intermittently, indicating in which direction it is intended to turn. As the steering wheel returns to the straight ahead position, the indicator mechanism automatically cancels the signal and the lever returns to its neutral position. Both the front and rear external turn signal lights will flash together according to the direction selected.

Proper functioning of the turn signal lamps is indicated by normal flashing of the green tell-tale lights on the instrument panel *as well as* by an audible clicking signal from the flasher timing unit. If the tell-tale signal should increase appreciably in flashing speed *and* the clicking signal is *not* audible *or* if the tell-tales do not flash when the turn signals are operated, a malfunction exists in the system, which should be attended to immediately in the interest of your safety and other road users.



'LANE CHANGE' INDICATION.

Using the 'two-stage' operation it is possible to signal "lane changing" by exerting slight finger pressure on the turn signal lever in the direction of intended car movement. On release of finger pressure the lever will return to the neutral position.

IGNITION/STEERING LOCK

Refer to Sections 3 and 5 for operation.

LIGHTS

Head lamps, tail lamps, parking lamps, instrument lighting and interior lighting are controlled from a single switch marked LIGHTS, located at the right hand end of the instrument facia. The various operating positions of the switch control the lamps in the following order:—

FULLY IN. No lighting switched on, but the interior lighting may be used — Refer to Rotary Control — Interior Lighting.

OUT TO FIRST STOP. Parking, Tail, Licence Plate and Instrument Panel Lighting is switched on. The Instrument Panel is illuminated by four recessed lights located in the Instrument Panel Shroud.

OUT TO SECOND STOP. The headlamps are switched on in addition to the above lights.

ROTARY CONTROL—INSTRUMENT LIGHTING. The brightness of the instrument lighting may be controlled by rotating the Lighting Control Switch, the brightness increasing as knob is turned anti-clockwise and decreasing when turned the other way, when the switch is in one of the out positions.

ROTARY CONTROL—INTERIOR LIGHTING. This lighting may also be switched on through rotary control of the Lighting Control Switch and will be switched on when it is turned fully anti-clockwise. The rotary control of the knob is effective at all positions for the interior lighting.

CONSOLE FLOOR SHIFT SELECTOR — AUTOMATIC TRANSMISSION. Where fitted, the internal lighting of the console is controlled with the instrument panel lighting.

HEADLAMP DIPPING. The dipper switch is located at the top of the floor toe-pan in front of the driver and to the left of the clutch pedal position. The LIGHTS switch must be out to the Second Stop, before the dipper switch will be effective.

Four (4) headlamp system. Operating the dipper switch alternates the light beams on the outer two (2) headlamps between low and high beam. The inner two (2) headlamps operate only when high beam is selected.

CHOKE (MANUAL CONTROL)

6 Cylinder Models Only

The choke control is a finger grip, located at the upper L.H. side of the instrument shroud and is marked "CHOKE". When starting a cold engine it is necessary to provide a fuel mixture richer in petrol than is ordinarily required. (Refer also to Section 5 — Driving Instructions.) The manually operated choke is connected to the Carburettor Throttle Control in such a manner that a richer mixture of petrol to air is provided to ensure ease of starting under all conditions. However, its correct use is extremely important; If improperly handled it may affect the life of the engine by thinning the lubricating oil film on the cylinder walls with unburned petrol.

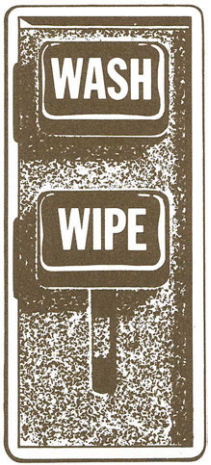
WINDSHIELD WIPERS AND WASHER

Both wipers and washer mechanism operate when the ignition switch is in either the ON or ACC position (refer Windshield Notes in Section 10).

WIPER OPERATION

The windshield wiper button has three positions on the slide control; from top to bottom the operation is as follows:—

OFF — Top Position.
SLOW — Centre Position.
FAST — Lowest Position.



The twin-button wash and wipe switch unit retains the combined operation for these functions.

WASHER OPERATION

The windshield washer operates in the following manner:—

1. By depressing the WASHER button, the wipers automatically start to operate at SLOW speed and a measured amount of washer fluid is squirted onto the windshield via the two twin-jet nozzles. The wipers will continue to operate at SLOW speed until the button of the slide control is moved upwards to the OFF position.
2. If the WASH button is depressed while the WIPE button is in the FAST position, the washer fluid is pumped out at a greater rate.

CIGAR LIGHTER

To operate, simply press in on the lighter knob. It will stay in until the element is hot, at which time the lighter will automatically "pop" back ready for use.

HORNS

Both a low note and a high note horn is fitted.

The horn is operated by pressing the rocking bar, which is situated across the centre of the steering wheel.

The horn can be operated at any time.

HEATER AND AIR CONDITIONING CONTROLS

Refer to Section 6 for heating and air-conditioning information regarding the operation of those units.

RADIO

Where a radio is fitted, the manufacturer's instructions relating to the operation of this option will be supplied.

POWER OPERATED ANTENNA

Where this option is fitted, a control switch is located on the right side of the instrument cluster panel and it controls the raising and lowering of the antenna, mounted at the rear of the vehicle.

DRIVING CONTROLS

Refer to Section 5—Driving Instructions—for the operation of the clutch, transmission selector levers, choke, brakes and starting procedure.

SECTION—5

DRIVING INSTRUCTIONS

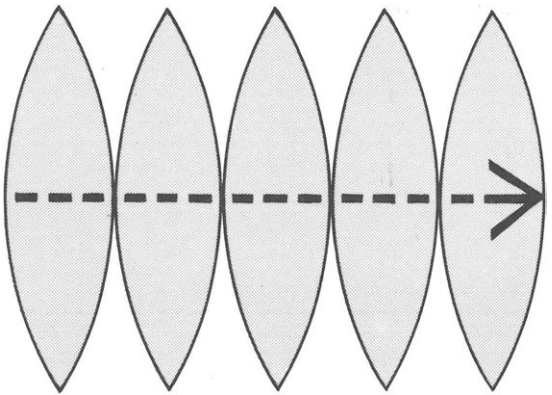
Driving Your New Vehicle
Starting Procedure
Manual Transmissions
Automatic Transmissions
Brake Operation
Power Steering
Limited Slip Differential
Emergency Conditions

USE OF THE CORRECT GRADE OF PETROL

Premium fuel must be used when engine compression ratios exceed 8.3 to 1 and this applies to the normal six cylinder and V8 engines, unless the engine has been ordered with an optional low compression ratio cylinder head.

Refer Page 81 for engine numbers in order to determine compression ratios.

DRIVING YOUR NEW VEHICLE



RUNNING-IN

To properly run-in the moving parts and settle other components, the following recommendations should be observed:

Up to 300 miles — do not exceed 50 m.p.h. or 80 km/h.
(500 kilometres) — vary the speed range when practicable.
— do not brake heavily (unless in an emergency).

Up to 1,000 miles — avoid hard acceleration.
(1,500 kilometres) — avoid periods of steady speed.

GENERAL DRIVING RECOMMENDATIONS

1. See that your vehicle is serviced at regular intervals in accordance with the recommendations made in the Guardian Maintenance Plan.

2. Do not race the engine when cold or when the vehicle is not in motion.

3. Manual Transmissions — do not hesitate to select a suitable lower gear to avoid overloading the engine and transmission.

4. As Power-assisted brakes are fitted, caution should be used in applying the brakes quickly until the braking effect is appreciated.

5. When Power-assisted Brakes are being used, unless the engine is running, a considerable increase in braking effort is required. (Refer Page 36.)

6. Steering operation of vehicles fitted with Power-assisted Steering will require increased effort when the engine is not running. (Refer Page 37.)

STARTING PROCEDURE

6 CYLINDER ENGINES

All these engines use a manually controlled choke. Adjustment of the choke should follow the recommendations stated below.

8 CYLINDER ENGINES

In vehicles which are equipped with V8 engines there is no choke knob on the dash panel because an automatic choke is incorporated in the carburettor, therefore follow the recommendations stated below.

PARKING BRAKE. Ensure that the parking brake is firmly applied.

MANUAL TRANSMISSION. Depress the clutch and check that the gear shift lever is in 'Neutral'.

AUTOMATIC TRANSMISSION. Check that the selector lever is in either the 'N' or 'P' position, otherwise the Neutral Safety Switch will not allow the engine to start.

IN COLD WEATHER. Pull the CHOKE control out to its full extent. Do not pump the accelerator while starting and do not race the engine immediately after starting and push the CHOKE control halfway back as soon as the engine starts.

IN HOT WEATHER. Usually, it should not be necessary to use the CHOKE, but if required only use a partial setting.

ENGINE FLOODED. Ensure the CHOKE control is fully in. Hold the accelerator pedal down to the floor and maintain this position while operating the Starter. Do not pump the accelerator pedal. (Let the accelerator up sufficiently to stop the engine racing after it starts.)

ENGINE HOT. It will usually be found that no CHOKE is needed to start the engine again after it has reached normal operating temperature. Therefore, the CHOKE should only be used sparingly if any difficulty in starting is experienced.

STARTER OPERATION. Turn the ignition key to the START position and release it after the engine has started.

WARM UP. Adjust the CHOKE to the position required for smooth operation during the warm-up period. Push the CHOKE control all the way in as soon as the engine temperature will permit smooth running with the control in this position.

IN COLD WEATHER. Depress accelerator pedal once to the floor, then release. (This action presets the automatic choke.)

IN HOT WEATHER. Depress the accelerator well down and hold this position while operating the Starter.

ENGINE FLOODED. Hold the accelerator pedal down to the floor and maintain this position while operating the Starter. Do not pump the accelerator pedal. (Let the accelerator up sufficiently to stop the engine racing after it starts.)

ENGINE HOT. Depress the accelerator pedal partially and hold this position when the Starter is operated.

STARTER OPERATION. Turn the Ignition key to the START position and release it after engine has started.

WARM UP. Before driving away, depress the pedal and slowly release it, so that the fast idle setting of the automatic choke may be reduced — this will depend on the ambient temperature. After the engine has reached a satisfactory operating temperature, the automatic choke mechanism will disengage.

INITIAL RUNNING. Always let a cold engine run at a fast idle speed for 20 to 30 seconds after starting and drive at a moderate speed for the first 5 to 10 minutes, particularly during cold weather.

MANUAL TRANSMISSION — 3 SPEED

This incorporates three **(3)** fully synchronised forward gears and a non-synchronised reverse gear. The shift pattern is the familiar "H" pattern as illustrated. For smooth, efficient transmission operation, the following detailed shift procedures are recommended for your vehicle.

NOTE: *Before LOW **(1)** or REVERSE **(R)** gear is engaged, it is necessary to lift the shift lever against spring pressure from the Neutral position, **(N)**.*

N NEUTRAL — for use when starting or running the engine while the vehicle is stationary. NEVER ALLOW VEHICLE TO TRAVEL WHILE USING NEUTRAL.

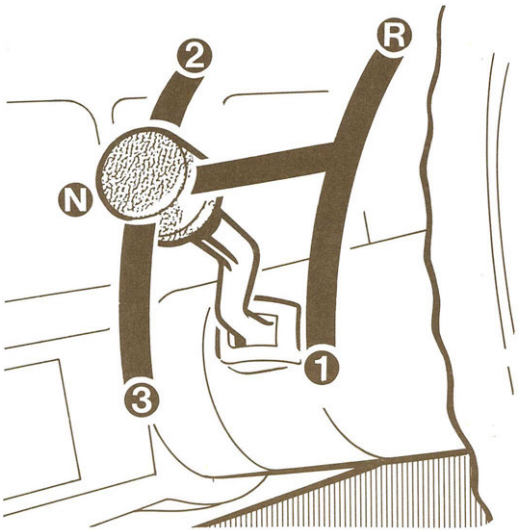
1 FIRST GEAR (LOW) — Depress the clutch pedal, shift into **(1)** and smoothly release the clutch pedal while simultaneously pressing on the accelerator pedal. First gear should always be used to start the car moving.
Also, having a synchromesh engagement, this gear can be selected while the vehicle is moving to avoid overloading the engine, but, do not engage above 20 m.p.h. or 30 km/h.

2 SECOND GEAR (INTERMEDIATE) — When the car has gained sufficient speed, depress the clutch pedal, move the gearshift lever into **(2)**, smoothly release the clutch pedal, adjusting the accelerator pedal as required to maintain smooth progress. Avoid starting from a standstill in second gear as this practice may cause excessive clutch slippage, thereby reducing clutch life.

NOTE: Use **(2)** for speeds under 30 m.p.h. or 50 km/h in traffic conditions. *Also, this gear gives improved acceleration and retardation and particularly when negotiating steep gradients, but, do not engage above 45 m.p.h. or 70 km/h.*

3 THIRD GEAR (HIGH) — As the car continues to gain more speed, shift into **(3)** co-ordinating the clutch and accelerator operation, as previously described. Third gear is the cruising gear for all normal driving.
NEVER USE THIRD GEAR TO MOVE AWAY FROM REST.
TO STOP — Release the accelerator pedal and depress the brake pedal. Just before the car stops, depress the clutch pedal and the brake pedal. Move the gearshift lever into Neutral.

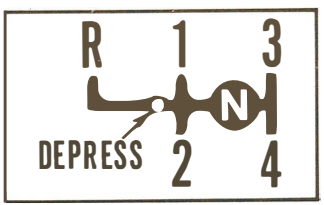
R REVERSE — The car must be brought to a complete stop before using the shift lever. Depress the clutch, PAUSE, move the shift lever into **(R)** before co-ordinating the clutch and accelerator movements.



REVERSING LIGHTS

When REVERSE is selected, and the Ignition Switch is in the 'ON' position, the two (2) rear turn-signal lights and side-marker lights will operate continuously unless the turn-signal function is selected in which case, only the lamps on the side selected will blink, the other side remaining steady.

MANUAL TRANSMISSION — 4 SPEED



This shift pattern will be shown on the console.

These transmissions incorporate four (4) fully synchronised gears and a non-synchronised reverse gear.

The gear selection is as indicated by the shift pattern. Selection of forward gears should normally take place on a 1-2-3-4 sequence co-ordinating the clutch and accelerator pedal operation as described in the "3-Speed" manual transmission section.

1. FIRST GEAR (LOW) — Having a synchromesh engagement, this gear can be engaged while the vehicle is moving in order to avoid overloading the engine, up to 20 m.p.h. or 30 km/h.

2. SECOND GEAR (LOW INTERMEDIATE) — Use this gear at slow speeds — less than 30 m.p.h. or 50 km/h when driving in traffic conditions. Also this gear gives improved acceleration and retardation when negotiating steep gradients.

3. THIRD GEAR (HIGH INTERMEDIATE) — Use this gear for acceleration and retardation in the higher speed range of 30-50 m.p.h. or 50-80 km/h and where highway conditions are appropriate.

4. FOURTH GEAR (HIGH) — To be used for normal cruising, down to approximately 30 m.p.h. or 50 km/h but an intermediate gear should be selected when acceleration or retardation is required.

R. REVERSE — This gear must only be selected when the vehicle is stationary. A PAUSE after depressing the clutch pedal is desirable before moving the lever into **R** as indicated by the shift pattern.
Refer to Page 31 for Reversing Lights.
The lever knob must be pushed DOWNWARDS to pass into the R gate path.

Automatic Transmissions
Trimatic and Turbo Hydramatic

These transmissions are of an automatic three-speed design. The shift patterns are arranged with **Park (P)** position at one end followed in sequence by **R** (Reverse), **N** (Neutral), **D** (Drive), **S** (Second) and **L** (Low). Both automatic transmissions are connected electrically through a neutral safety switch designed to permit starting of the engine **only** when the transmission selector is in **Park** or **N** positions. After starting the engine you need only to select the range desired (normally **D**), release the parking brake and gradually depress the accelerator. Gradual accelerator pressure will give the best fuel economy — Hard acceleration gives top performance, but lowers the fuel economy.

For additional braking effect, as is sometimes needed in mountainous terrain, select either **S** or **L** positions (Refer to later notes regarding speed limit recommendations).

COLUMN SHIFT Where fitted, the column mounted shift lever features a spring loading against a stepped segment.

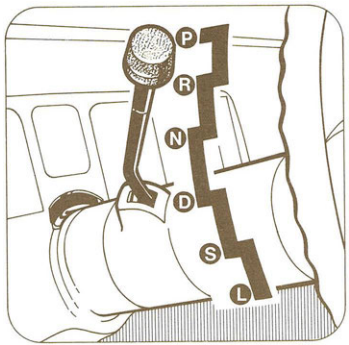
FLOOR SHIFT Where fitted, this console located T-handle shift lever features a "straight-line" movement.

Shift Lever Sequence: **P** to **L** — Depress thumb-button to move from **P.**

Release of button before **R** will still allow selection through to **R,** to **N,** to **D**. Depress button again to select **S** or **L.**

Shift Lever Sequence: **L** to **P.**

L to **S** to **D** to **N** can be selected without depressing the thumb-button. Depress button to select **R** or **P.**



*By keeping the lever raised, selection from **L** to **P** or **P** to **L**, and any intermediate positions can be made.*

*By keeping the thumb-button depressed, selection through from **L** to **P** or **P** to **L**, and any intermediate positions can be made.*

REFER TO THE FOLLOWING PAGE FOR FURTHER OPERATIONAL DETAILS AND SPEEDS.

PASSING (Full Throttle Detent)

While driving, if the accelerator pedal is pressed down hard, in order to accelerate or pass other traffic, the following shift changes will normally occur automatically.

SPEED	6 CYL. m.p.h.	6 CYL. km/h.	8 CYL. m.p.h.	8 CYL. km/h.	EFFECT
Shift Lever in **D**					
Over	65	105	70	110	No Change
Under	55	90	60	95	Changes to Second Gear
Under	30	50	30	50	Changes to First Gear
Shift Lever in **S**					
Over	35	55	35	55	No Change
Under	30	50	30	50	Changes to First Gear
Shift Lever in **L**					
Don't Exceed	40	65	40	65	No Change

P **PARK** — This position is to be used in conjunction with the parking brake. **P** must never be selected when the vehicle is in motion. It is one of only two positions (the other is **N**) in which your vehicle may be started.

R **REVERSE** — For reversing; the vehicle must be stationary before selecting this gear.
Refer to Page 31 for Reversing Lights.

N **NEUTRAL** — This position can be used to start the engine, especially if the vehicle is moving with a stalled engine; but never select **N** while driving normally. Also, if the vehicle has to be towed using the rear wheels, this position must be used. (Refer also to page 38.)

D **DRIVE** — For all normal forward driving. This position allows for the acceleration and cruising adequate for all but the most crucial driving situations. It permits the transmission to operate through its complete range of gear ratios and select the proper ratio for road and load conditions.

S **SECOND** — This position may be selected when travelling down a moderate grade where slight braking action is desired without brake application and the transmission will shift to second gear when the selector lever is placed in **S**.

6 Cyl.: Do not select over 60 m.p.h. or 95 km/h.

8 Cyl.: Do not select over 70 m.p.h. or 110 km/h.

L **LOW** — This position may be selected for maximum braking down severe grades. When the selector lever is moved to **L**, the transmission will shift to first gear. The transmission selector lever must be shifted back to **S** or **D** positions before the transmission will again upshift.

6 & 8 Cyl.: Do not select over 40 m.p.h. or 65 km/h.

AUTOMATIC TRANSMISSION—DRIVING DON'TS

- Do not use high engine R.P.M., with the brakes applied in **L, S, D** or **R** positions as this will cause damage to the transmission by overheating.
- Do not hold car on upgrade by increasing engine R.P.M. Use the brakes.
- Do not shift selector into **R** or **P** positions before coming to a complete stop.
- The vehicle tends to 'creep' or move when the selector is moved to **L, S, D** or **R** positions. Application of the foot brake or parking brake will hold the car until motion is required.
- Do not coast with the car in **N** at any time.
  Leaving the car in one of the driving positions allows the engine to supply some braking force when coming to stops and also helps keep your car under control at all times.

BRAKE OPERATION

BRAKE WARNING LIGHT (Refer also to Page 24)

In the event of the warning light being activated while the vehicle is moving and after the foot operated brake has been firmly used, pull across to the side of the road, braking as carefully as possible, but remember that:

(a) Stopping distance will probably be greater.

(b) Greater pedal effort may be required.

(c) Pedal travel should be greater.

Then, try, if the road gradient is considered sufficiently safe, to stop the vehicle from a low speed several times, bearing in mind that:

(1) If you judge such operation to be safe proceed cautiously at reduced speed to the nearest GM dealer for inspection and rectification.

OR

(2) If in your opinion the vehicle is not safe to drive, have it towed to a GM Dealer for inspection and repair.

REMEMBER, CONTINUED OPERATION OF THE VEHICLE FOR NORMAL USE IN THIS CONDITION IS DANGEROUS.

N.B. The addition of this warning indicator is not a substitute for the normal maintenance check of brake fluid level in the master cylinder.

DUAL CIRCUIT BRAKE SYSTEM

The foot operated brake system of your vehicle has two separate hydraulic systems — one operating the front wheels, the other operating the rear wheels. (Hydraulic pressure is provided from the foot activated master cylinder, which is a tandem design, and provides the same hydraulic pressure to each system.)

Therefore, in the event of either the front or rear system being damaged and developing a fault through leakage, one set of wheels will still be effectively braked under increased braking pressure.

An attentive driver should immediately be aware of any change in the operating 'feel' from the brake pedal in regard to length of travel and brake effectiveness as related to the pedal pressure applied — any change in normal operation at once indicates a non-standard condition and the situation should be carefully watched for a return to normalcy or checked at your nearest GM dealer or a service station, depending on the urgency of the situation.

BRAKE FLUID

The fluid type now used in production for all vehicle braking systems is a high boiling point brake fluid — Specification GM 4653 Type 450. Because they are compatible, new and old type fluids can be mixed in a braking system but a reduction in heat resistance will occur.

BRAKES — DRIVING CAUTIONS

- Driving through deep water may affect brake performance. Applying the brakes lightly will indicate whether they have been affected. To dry them quickly, lightly apply the brakes while maintaining a slow forward speed with an assured clear distance ahead until brake performance returns to normal.
- Brake pedal travel should not be obstructed by improper floor mats or other interfering material under the pedal.
- "Riding the brake" by resting your foot on the brake pedal when not intending to brake can cause abnormally high brake temperatures, excessive lining wear and possible damage to the brakes.

DISC BRAKES — Power Assisted

Power assisted front disc brakes give virtual fade free characteristics. No adjustment is required as the disc brakes automatically adjust themselves to compensate for brake pad wear.

The new type of disc brake, developed to give greater capacity to handle the braking loads at the front of the vehicle, is designed with ventilating passages between the working faces of the disc.

A single piston floating head caliper is used to operate the clamping of the brake pads against the disc faces.

Also, with this braking system, a 'proportioning valve' is incorporated in the braking system. The function of this valve is to prevent premature rear wheel 'lock-up' under emergency braking conditions.

POWER ASSISTED BRAKE NOTES

Power assisted brakes utilize engine intake manifold vacuum to reduce the braking effort required at the pedal. A built-in vacuum reserve will supply two or more brake applications after the engine has stopped.

With the engine switched off and the vacuum reserve exhausted the vehicle can still be stopped but much more effort will be required applying the brake pedal.

With power assisted brakes fitted — NEVER:

— let the vehicle run down steep grades without the engine running.

— coast with the engine switched off.

— have the vehicle towed on four wheels without a solid connection between the towing vehicle — if necessary the vehicle will have to be towed by a tow-truck i.e. two wheels off the ground.

PARKING BRAKE

The parking brake activating lever is mounted on the floor at the driver's side of the front seat between the seat and the door.

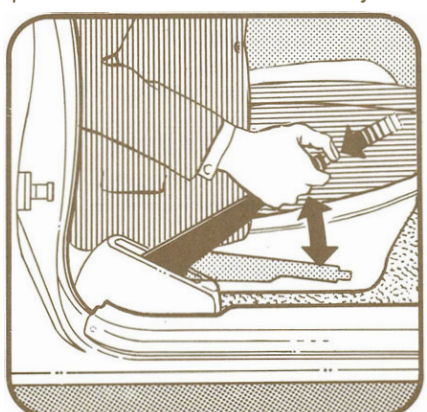
Whether released or applied, the lever remains down, therefore, it is not possible to tell if the brake is on, by the lever position. However, this type of mechanism enables the lever to stay clear of the driver when entering or leaving the vehicle.

To Apply — Pull the lever straight up using the grip at the end of the lever. DO NOT PRESS THE RELEASE BUTTON.

To Release — Pull the parking brake lever upwards while simultaneously pressing in the release button at the end of the lever with the thumb. After the ratchet system disengages, retain pressure on the button while lowering the lever.

WARNING LIGHT

If the Ignition Switch is in the "ON" position, the Warning Light will operate while the brake is not fully released.



POWER STEERING

The new internal servo system has been designed to achieve a high degree of compactness together with a variable ratio characteristic which makes for reduced steering effort at either end of the effort scale i.e. towards maximum lock positions.

N.B. Power steering is provided by a hydraulic pump driven by the engine. When the engine is not running or if the power steering pump drive belt breaks, there is no power assistance and much greater steering effort is required.

Therefore, avoid turning the steering wheel when the engine is not running.

"LIMITED SLIP" DIFFERENTIAL

Where this differential is fitted, it can be identified by a metal tag retained by the axle filler plug. The label calls attention to the need for special oil in this type of axle **which must comply with the GM Specification of 9985035.**

USE OF UNSUITABLE OIL COULD RESULT IN NOISY OPERATION AND/OR EXCESSIVE WEAR.

The "Limited Slip" Differential directs the major driving force to the rear wheel having the greater amount of traction, but it will not interfere with the steering characteristics or normal differential action.

When the rear wheels are under extremely unbalanced tractive conditions (such as when one wheel is on a dry road surface and the other is on ice or mud) wheel spin can occur if over-acceleration is attempted. This condition may also be experienced if the driver over-accelerates on a wet road where a sharp bend must be negotiated.

It is important that there be no excessive rear tyre differences. One indication of this condition is "swerving on acceleration". If this is encountered, check the rear wheels for different tyre size, air pressures or excessively different wear and tread patterns.

CAUTION: Never run the engine with a gear engaged and one wheel raised if the vehicle is fitted with a "Limited Slip" differential. The driving force directed to the wheel on the ground will cause the car to move.

EMERGENCY CONDITIONS

POWER ASSISTED DISC BRAKES AND STEERING — REFER TO NOTES ON PAGES 36 AND 37 BEFORE BEING PUSH STARTED OR TOWED ON 4 WHEELS.

WHERE A BOOSTER BATTERY IS TO BE USED FOR STARTING, REFER TO PAGE 73 FOR PRECAUTIONS AND INSTRUCTIONS.

NEVER TOW A VEHICLE TO START IT BECAUSE THE SURGE FORWARD AFTER THE ENGINE STARTS COULD CAUSE A COLLISION WITH THE TOWING VEHICLE.

PUSH STARTING — Manual Transmissions

SHOULD IT EVER BE NECESSARY TO START THE ENGINE BY PUSHING THE VEHICLE:

1. Place the gear shift lever in NEUTRAL (N).
2. Check the choke or accelerator pedal setting as they apply to the Starting Procedure (Page 30).
3. Turn the ignition switch to ON.

WHEN THE VEHICLE REACHES APPROX. 10 m.p.h. (15 km/h)

4. Depress the clutch.
5. Select high gear (i.e. 3rd in 3 speed or 4th in 4 speed).
6. Slowly allow the clutch pedal to come up.

WHEN THE ENGINE STARTS—

7. Drive away from the pushing vehicle.
8. Stop your vehicle at the side of the road,
9. Allow the engine operation to normalise before proceeding.

Bumpers and other parts contacted by the pushing vehicle should be protected from damage during pushing.

PUSH STARTING — Automatic Transmissions

If for any reason the starter motor is inoperative, it is **not possible** with an automatic transmission to select a range for starting the engine by pushing the vehicle.

If the fault is a "flat" battery, the engine can be started with the aid of a booster battery.

TOWING — Manual and Automatic

N.B. When being towed the ignition-steering lock must be in the OFF position (NOT LOCK).

The following conditions should be observed:

1. Ensure the transmission shift lever is in NEUTRAL.
2. Provided the transmission is not low on fluid, the vehicle can be towed on four wheels — using a solid connection — or on the two rear wheels.
   In addition:
   (a) If the transmission is suspected of being damaged or low on oil, then the propeller shaft must be disconnected at the rear and attached to the underside.
   (b) If the transmission is undamaged and the propeller shaft is not disconnected, in the case of an automatic transmission, the vehicle must not be towed at more than **30 m.p.h. (50 km/h) for more than 30 miles (50 km)** provided the transmission is not low on fluid.
   NOTE: Always check the fluid level in the automatic transmission after the vehicle has been towed and top up only with Dexron automatic transmission fluid if required. Refer Page 80 for fluid level checking procedure.
3. Where it is necessary to tow the vehicle on its front wheels retained in the straight ahead position; do not allow the ignition-steering lock to remain in the LOCK position — select "OFF".

ROCKING. If it becomes necessary to 'rock' the car to free it from sand, mud or snow, move the selector lever from **D** to **R** in a repeat pattern while simultaneously applying moderate pressure to the accelerator. Do not race engine. Avoid spinning wheels when trying to free the car.

SECTION—6

VENTILATION AND CONTROLS

Flow-Through Ventilation
Heater/Demister
Integrated Air Conditioning
Dusty Conditions
Exhaust Gas Warning
Petrol Fumes

GENERAL NOTE

The vehicle features a flow through ventilation system, which replaces the front door Controlled Ventilation (C.V.) windows. Flow through ventilation will operate with the windows closed, and gives an adequate air flow in mild to warm conditions. During hot weather conditions, it is desirable to partly open the windows, as this will give added ventilation to achieve the desired comfort level.
Careful note should be taken of the following pages in order that a proper understanding of the various ventilation systems can be appreciated depending on the equipment fitted.

FLOW-THROUGH VENTILATION SYSTEM

(Where Air Conditioning is not fitted)

It is possible to maintain a constant exchange of air through the vehicle interior without having a window open.

AIR ENTERS THE PLENUM CHAMBER BECAUSE OF A PRESSURE INCREASE IN FRONT OF THE WINDSHIELD, DUE TO THE FORWARD MOVEMENT OF THE VEHICLE.

Don't allow the plenum inlet grille to be covered or clogged with leaves, snow, etc.

After entering the plenum chamber, through the grille in front of the windshield, the air is distributed to four outlets, 2 Rotary-Type Vanes, set in the instrument panel, one on each side, and 2 Down-flow outlets, one on each side of the instrument panel above the foot wells.

ROTARY-TYPE VANE OUTLETS (Upper Outlets)

There are knurled edges at both ends of each vane unit enabling the vanes to be rotated through 180° and to close off the supply of air from the plenum chamber when necessary.

DOWN-FLOW OUTLETS (Vent Controls)

A separate hook-type finger grip, marked "VENT", is provided on each side of the instrument cluster area and their operation is related to the Down-flow outlet on the side that is operated, i.e. L.H. grip controls the L.H. side, R.H. grip controls the R.H. side. To open, pull the controls out.

N.B.: No connection exists between the Vane outlets and the VENT controls. When the VENT controls are closed, maximum air flow is achieved from the upper outlets.

When the VENT controls are fully opened, maximum air flow is achieved from the lower outlets with a reduced air flow from the upper outlets.

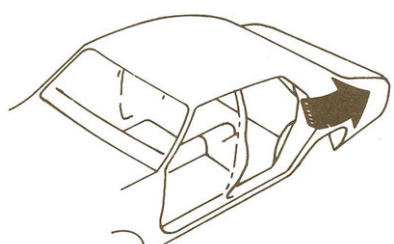
Partial opening of the VENT controls permits a moderate air flow simultaneously from both the upper and lower outlets and adjustment can be varied to achieve individual requirements.

PRESSURE RELIEF VALVE — FLOW THROUGH VENTILATION SYSTEM

While the vehicle is moving and if the plenum chamber outlets are allowing air to flow into the vehicle interior, a slight pressure build-up will occur if all the windows remain closed.

Therefore two one-way relief valves are provided to complete the control of the flow-through concept. These are situated below the belt line of the body work in the rear-most door opening lock pillar, where an exterior pressure decrease is generated by forward movement of the vehicle.

WHEN STACKING LUGGAGE IN THE LUGGAGE COMPARTMENT DO NOT BLOCK THE 4 LARGE HOLES AT THE SEAT BACK — AS THIS WILL HINDER THE EFFECTIVENESS OF THE FLOW-THROUGH VENTILATION SYSTEM.



Air-flow comes from the luggage compartment forward to the Pressure Relief Valve.

HEATER/DEMISTER

(Where Air Conditioning is not fitted)

This unit, where fitted, has the controls grouped on the lower right-hand side of the instrument panel.

WHEN OPERATING, AIR IS DRAWN FROM THE PLENUM CHAMBER.

In order that a full flow effect can be obtained from this unit it is advisable to shut off the Rotary-Type Vane outlets and the Down-flow outlets at both ends of the instrument panel (refer previous notes in this Section) to prevent recirculation of the interior air through the plenum chamber.

Air outlets from the Heater/Demister are provided in the centre of front passenger compartment under the instrument panel and at each side of the windshield base.

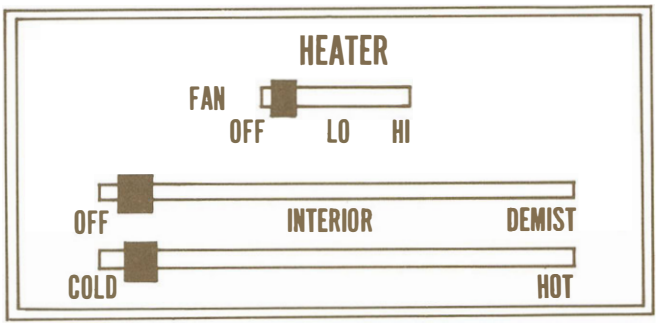
Blower Fan: The two-speed fan is controlled by the top control of the HEATER facia grouping and has three positions, OFF - LO - HI, and will operate when the ignition/steering lock is in the 'ACC' or 'ON' positions.

Distribution: Interior distribution of the air from the unit is achieved by moving the middle control lever across from the 'OFF' position. When it reaches the INTERIOR position the maximum flow will be diverted to the front floor area and a little to the demisting ducts.

Further movement of the control to the DEMIST position will direct all the air to the demisting ducts at the base of the windshield.

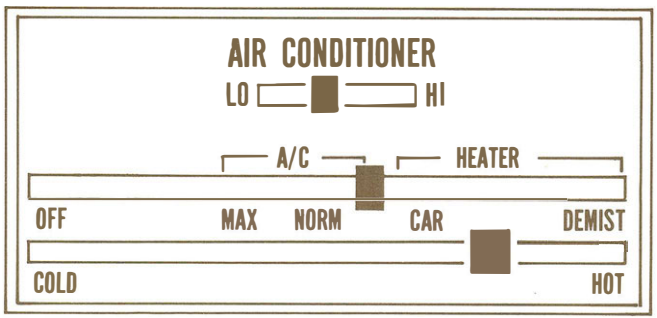
Heat Control: This control, the bottom lever of the HEATER group, regulates the amount of heated air to be mixed with the air passing through the unit. When the control lever reaches the 'HOT' position all the air is directed through the heater core.

By varying the three controls provided, a range of conditions can be achieved which are the most desirable for personal comfort.



Common-sense operation of the three Heater/Demister controls in conjunction with general ventilation requirements will give comfortable conditions inside the vehicle.

INTEGRATED AIR CONDITIONING (Optional)



FLOW-THROUGH VENTILATION

It should be noted that unless the MODE SELECTOR LEVER (refer to following notes) is set in one of these positions, NORM — CAR — DEMIST, a flow of outside air from the plenum chamber will not occur.

General Notes: The system is designed to combine a separate cooling and heating function in a single unit and to control both the heating and cooling of the vehicle interior. The air may be cooled and heated using an "AIRMIX" Principle.

Heating and Cooling cores. The heater core is connected to the engine cooling system. Also, there is a cooling core through which air must pass. As the air passes through the cooling core, dust and pollen are extracted and excess moisture removed and drained away.

Fully Adjustable Louvre Outlets. The 3 outlets have fully adjustable vertical and horizontal directional louvres. The outlet can be used to direct air into the rear passenger compartment. The three vents are directly connected to the air conditioning system.

FAN CONTROL

The air flow through the system is controlled with a four speed fan, and is operated by the switch located on the upper section of the air conditioner control panel which is on the right of the steering column.

The fan lever has four positions from 'LO' at the left to 'HI' at the right. The fan operates automatically when the ignition/steering lock is switched to the 'ON' or 'ACC' positions, regardless of the switch position, with the exception of the 'OFF' position on the mode selector (central) lever, in which case the complete system is non-functional.

INTERIOR HEAT DISSIPATION

When the vehicle has been left under conditions where a high degree of "heat soak" has taken place, (i.e. parked with all windows closed in the sun during warm to high temperature periods) allow outside air to circulate through open windows while driving, to assist in trim cool-down. After several minutes, close all the windows again, while retaining the Mode Lever in the MAX position (refer Mode Selector Lever) and use a high fan speed.

DISPERSION OF ODOURS, SMOKE, ETC.

Use any Mode Selector Lever position except MAX, to obtain an exchange of air. Re-select MAX if desired, after sufficient air has been exchanged, selecting a fan speed as desired.

HIGH HUMIDITY AND GLASS FOGGING

Where conditions of high moisture content in the air exist, the use of a high fan speed and MAX Mode Selector Lever position will quickly assist in extracting moisture from the air. This combination should also be used for several minutes to avoid fogging of glass areas, particularly the windshield, before selecting DEMIST.

MODE SELECTOR LEVER OPERATION (CENTRAL LEVER)

Selection Note: Use the 'feel' of a 'click-in' to locate the lever for a particular setting.

OFF — This position shuts the entire system off, including the blower fan.

MAX — Air from the passenger compartment is recirculated only and discharged through the upper level outlet vents located on the instrument panel.

Use MAX when maximum cooling or heating is desired. Also, it can be used to block out exhaust fumes (e.g. when following diesel powered vehicles).

NORM — Outside air is passed through the system and discharged through the upper level ventilation outlet vents located on the instrument panel. The air is discharged from the vehicle through the pressure relief valves located in body pillars. (Refer-Through Ventilation.)

Also, this position is the best for the prevention of dust entry into the passenger and luggage compartments.

CAR — Outside air is discharged through floor level outlets into the passenger compartment. A small proportion of this air is bled through the demister ducts, to maintain a clear windshield.

DEMIST — Outside air is directed through the demister ducts for maximum demisting of the windshield.

TEMPERATURE CONTROL (LOWER LEVER)

The lower lever on the air conditioner control panel varies the temperature of the air at the outlets from a minimum of 40°F. to a maximum of over 100°F.

The temperature can be adjusted for comfort, by moving the lever to an intermediate position between 'Cold' and 'Hot'.

Where air conditioning and automatic transmission is fitted to a vehicle sufficient brake pressure should be maintained when the vehicle is stationary and the engine is idling, in order to prevent "creep", that is, forward movement of the vehicle.

Every week, for 10 to 15 minutes, the Mode Selector Lever should be moved to the MAX or NORM positions, unless normal operation regularly includes these positions.

DUSTY CONDITIONS

The main cause of dust entering the passenger compartment while a vehicle is moving, is the resultant air pressure decrease that occurs in the compartment.

Therefore, under reasonably comfortable conditions, there is no reason to open the windows at any time; PARTICULARLY IN DUSTY CONDITIONS.

REMEMBER: The Flow-Through Ventilation System will work all the time, so long as the ventilation controls are properly adjusted.

Reference to the operating instructions for both the Heater-Demister and Air-Conditioning systems should be made to fully understand this condition.

PRESSURE BOOST: HEATER/DEMISTER

If it is considered necessary to boost the incoming air supply, shut off the Rotary Vane outlets and Down-flow outlets, then switch the fan to LO or HI.
Windows: If, for any reason, it is considered necessary to open a window, use a window on the WINDWARD side.

PRESSURE BOOST: AIR CONDITIONING

When the Mode Selector Lever is in any position except OFF or MAX boost pressure is obtained, however, a further increase in air-flow is possible by using a higher fan speed setting.

EXHAUST GAS WARNING

CARBON MONOXIDE

Carbon monoxide is a poisonous gas that initially can cause a state of unconsciousness, also, it is odourless and colourless and inhalation should be avoided at all times. Therefore, as CARBON MONOXIDE is present in engine exhaust gas and fumes, the following recommendations should be observed.

A — Always ensure that suspected exhaust system leaks are checked and rectified as required — AS SOON AS POSSIBLE.

B — If it is necessary to travel while it is thought that exhaust gases are entering the vehicle interior:

1. Keep all the windows CLOSED.
   (OPEN windows where a heater or air conditioning unit is NOT FITTED.)
2. Depending on the equipment fitted:
   (i) without heater, fully open the VENT controls.
   (ii) with heater, close off the Rotary Vane Outlets and Down-Flow Outlets (VENT controls), then use the fan of the heater unit to pressurize the interior with the distribution lever set at INTERIOR or DEMIST and the fan switch at HI.
   (iii) with Air Conditioning fitted, set the fan control at the 3rd or 4th (HI) position and the Mode Control Lever in the NORM, CAR or DEMIST position and away from the OFF or MAX position.

SITTING IN A PARKED CAR WITH ENGINE RUNNING FOR AN EXTENDED PERIOD IS NOT RECOMMENDED.

Do not run the engine in confined areas such as garages any more than necessary to move the vehicle in or out of the area.

When the vehicle is stopped in an unconfined area with the engine running for any more than a short period, the above instructions, A and B, should also be observed.

The trunk lid should be closed at all times while driving, to prevent exhaust gases being drawn into the vehicle.

However, if for some reason the rear compartment has to remain open while travelling, the following precautions should be observed:

1. OPEN both front windows to ensure a positive exchange of air from outside,

   AS WELL AS

   fully opening whatever ventilation system is fitted (outlined at the start of this page).
2. Do not exceed 30 m.p.h. (50 km/h) unless necessary, according to traffic conditions and regulations.
3. The best protection against carbon monoxide entry into the car body is a properly maintained engine exhaust system. Whenever a change is noticed in the sound of the exhaust system; when exhaust fumes can be detected inside the vehicle, or when the underside of the vehicle is damaged, have a competent mechanic inspect the complete exhaust system and adjacent body areas for broken, damaged or mispositioned parts, deterioration, open seams or loose connections which could permit exhaust fumes to seep into the trunk or passenger compartment. In addition, inspect the exhaust system each time the vehicle is serviced.
   Replace or adjust as required.

PETROL FUMES

CAUTION: Petrol is extremely inflammable and highly explosive under certain conditions. Always stop the engine and do not smoke or allow open flames or sparks near the vehicle when refuelling. If the presence of petrol fumes is noticed while driving, the cause should be determined and corrected without delay, and if necessary, with the assistance of a GM Dealer or a Service Station.

SECTION—7

TYRES & WHEEL CHANGING

(and Superlift Shock Absorbers)

General Notes
Tyre Inflation Pressures
Tyres for Fast Motoring
Tyre Rotation
Superlift Shock Absorbers
Jacking Safety Notes
Tools
Wheel Trim Removal
Spare Wheel Stowage
Jacking Procedure and Wheel Changing: Side-Sill Jack

VALVE CAPS

It Is always advisable to keep the valve caps fitted and screwed down firmly.

If one Is lost a replacement should be obtained as soon as possible.

GENERAL NOTES

TYRE LOADING — V — INFLATION PRESSURES

The standard tyres fitted to your vehicle are capable of carrying the vehicle, together with a given load capacity plus any accessories or options that may be fitted to the vehicle.

The "Load Specification" is the total load that the vehicle is rated to carry, including passengers and luggage; i.e. — 1100 lbs.

Where a load greater than 500 lbs. (driver and 2 passengers) is carried for any distance the inflation pressures should be increased as required up to the maximum recommendations (Refer Chart). The pressures shown in the chart will give satisfactory operation and tyre life under all normal road conditions. Where it is anticipated that unusual conditions will be encountered your GM Dealer will be pleased to discuss any necessary deviations.

INSPECTIONS

Tyres should be inspected frequently and also each time the vehicle receives a recommended service.

OVER INFLATION
Hard Ride, Poor Traction, Fabric Breaks

UNDER INFLATION
Runs Hot, Loosens Cords, Blowouts, Uneven Wear

PROPER INFLATION
Good Ride, Good Traction, Good Wear

PUNCTURES AND REPAIRS

It should always be remembered that a tyre which has been punctured, or a repaired tyre, will not be able to operate safely at the rated maximum speeds and due care should be taken.

When puncturing objects are removed, repairs will have to be made according to recommendations of the tyre manufacturer.

REPLACEMENT AND RETREAD TYRES

It is essential that the replacement tyres fitted to your vehicle be of a well known brand and quality. Also, it should be appreciated that if retread tyres are used, it is difficult to state categorically what their maximum speed should be, since the casing of such tyres will obviously have been subjected to very much more flexing than that of a new tyre. In view of the variability in the quality and physical condition of remoulded tyres, the safe speed will be considerably less than for "original equipment" tyres. For the motorist who intends to indulge in sustained high speeds, top quality new tyres only are recommended. Regrooved tyres should be avoided at all times.

HEAVY TREADS

Caution must be exercised when using tyres with heavy treads, including tyres designed to gain traction in bad weather conditions. At sustained high speeds, this type of tyre will run at higher temperatures than standard tyres and consequently should only be operated within the limits recommended by the tyre manufacturer.

Any doubts concerning the fitness of the tyres on your car for the purpose you require should be referred to your GM Dealer, who will be pleased to advise.

TYRE INFLATION PRESSURE RECOMMENDATIONS COLD: POUNDS PER SQUARE INCH

TYRE PLACARD — Each vehicle has an appropriately designed placard adhered to the inside surface of the instrument panel compartment lid. By taking note of the tyre size fitted to the vehicle, the correct inflation pressure for a particular load application can be selected.

AT NO TIME SHOULD THE TYRE PLACARD BE REMOVED — IT IS PLACED THERE AS PART OF THE AUSTRALIAN DESIGN RULE REQUIREMENTS.

MAXIMUM LOAD RATING — Shown on the tyre at a specific pressure BUT, this pressure may not be required in normal operation. REFER TYRE PLACARD.

TYRE SIZES — Some sizes listed may not be available as Regular Production Options. However, they may be fitted as replacements in an approved manner, provided the rim size specification is suitable as shown on the TYRE PLACARD.

The tyres do not require any difference in inflation pressures between front and rear, provided the load distribution is kept within reasonable limits.

Some tyre manufacturers, particularly in the case of radial construction tyres, may suggest variations to suit special handling requirements. Provided this is done on the advice of a recognised authority and the minimum and maximum pressures in the chart are observed, satisfactory operation will be maintained.

- For maximum tyre service: Keep tyres properly inflated and use an accurate gauge.
- After inflating, be sure valve caps are in place and screwed down finger-tight.
- When loads above average are carried for any distance, adjust pressures as required.
- Tyre inflation pressures may increase as much as 6 lbs./sq. in. when hot. NEVER REDUCE THIS PRESSURE INCREASE.
- Loads should be distributed as evenly as possible to avoid overloading the rear tyres.
- Care should be taken not to overload the rear tyres by exceeding the tow-bar load allowed.
- Don't forget to check the spare tyre pressure.
- Always increase the tyre pressures for sustained highway speeds over 75 m.p.h. (120 km/h).

Tyres and Fast Motoring

For high speed or improved performance and handling, tyre pressures may be increased at the expense of riding comfort.

With this in mind, we consider it advisable to offer some comments concerning the operation of tyres at high speeds as the maximum permissible speed for a tyre cannot be defined without qualification. For example, the prevailing air temperature, the type of road surface, the inflation pressure, and in particular, whether the vehicle is going to be driven at high speeds for long periods, or whether high speeds will be only for short intervals, are some of the things which must be taken into consideration.

However, it should be noted that all the maximum speed recommendations require the following of the tyres:

(a) good condition, the walls and treads being free of cuts and abrasions,

(b) treads are not excessively worn, tread pattern still being visible over the entire tread surface,

(c) the tyres are not retreaded or regrooved,

(d) pressure increases, where necessary, are made for increasing loading.

(e) pressure increases, where necessary, are made for speed over and above the increases made for vehicle loading.

The Tyre Speed Rating Is indicated in the designation of tyre by a letter—

ON CONVENTIONAL CONSTRUCTION TYRES:—
— indicates a speed rating of 95 m.p.h. or 150 km/h.
L indicates a speed rating of 100 m.p.h. or 160 km/h.
S indicates a speed rating of 110 m.p.h. or 175 km/h.
H indicates a speed rating of 125 m.p.h. or 200 km/h.
Examples: E78-14 : E78L14 : E78S14 : E78H14

ON BELTED-BIAS PLY TYRES:—

Same markings and ratings as Cross-Ply Tyres.
But "B" is added to Indicate the addltion of a belt In the tyre construction. Examples: EB 78S14 : FB78S14

ON RADIAL PLY TYRES:—

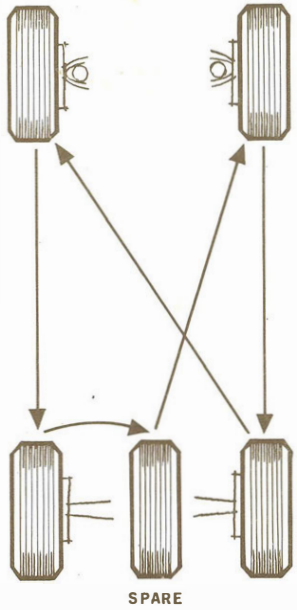
— indicates a speed rating of 105 m.p.h. or 170 km/h.
S indicates a speed rating of 113 m.p.h. or 180 km/h.
H indicates a speed rating of 130 m.p.h. or 210 km/h.
Examples: 185-R14 : 185SR14 : 185HR14

Radial Ply Tyres: Tyres so constructed have "Radial" marked on the tyre. Because of the stiffening belt under the tread, the ride characteristics of Radial Ply Tyres may be somewhat different from that experienced with conventional tyres. The under-inflated appearance of the radial tyre is normal. Follow the inflation pressure recommended in this Owner Manual. To achieve best all-round vehicle performance radial ply tyres should be used at all four wheel positions; that is, radlal ply tyres and conventional tyres should not be mixed on the same car.

When radial ply tyres are fitted, the toe-in setting at the front wheels should be zero if practical, but, the overall setting must be within the normal recommended limits.

In very rough country, radial ply tyres should be operated at maximum pressures in order to minimise the possibility of damage to the sidewalls.

TYRE ROTATION



Tyre interchanging, as shown in the diagram, saves tyres by equalizing wear and "exercising" the spare.

SUPERLIFT SHOCK ABSORBERS

Superlift rear shock absorbers are available as an option. These allow some control of vehicle level, so that when a vehicle is loaded or towing a caravan or trailer, the loaded height can be re-adjusted to give improved ride and handling. Also, they maintain a better headlamp level when high beam is used.

Superlift shock absorbers use compressed air and can be inflated or deflated through an air valve, similar to any standard tyre.

AIR PRESSURE VALVE LOCATIONS

Inside the luggage compartment on the right side to the upper rear of the wheel housing.

AIR PRESSURE RECOMMENDATIONS

1. Never allow the pressure to fall below 10 lbs. sq. in. as this will result in damage to the shock absorbers.
2. Maximum permissible pressure when the vehicle is fully loaded is 90 lbs. sq. in.
3. Maximum permissible pressure when the vehicle is unloaded is 30 lbs. sq. in.
4. The shock absorbers should be inflated when the vehicle is standing on a level surface and only until:
   (a) The vehicle appears to be level.
   (b) Maximum permissible pressure is reached.
   (c) Satisfactory ride characteristics are obtained based on previous usage, but not exceeding the above limits.

JACKING SAFETY NOTES

- **Do not start or run the engine while the vehicle is supported by the jack.**
- **Do not use the jack for any other purpose than changing wheels.**
- **Do not get under the vehicle while it is supported by the jack.**

Tools

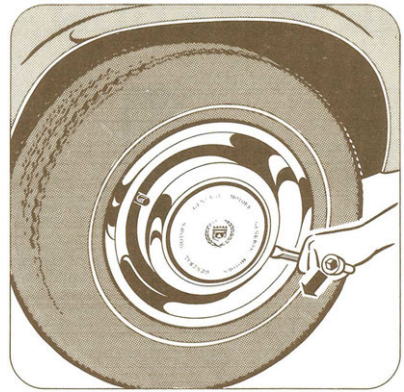
The tools provided consist of a jack, jack operating handle, and a wheel nut wrench.

Wheel Trim Removal

HUB CAPS

The hub caps can be removed using the blade end of the wrench. Insert the blade behind the hub cap at a position diametrically opposite the valve then prise off the cap, twisting the wrench toward the tyre at several locations, if necessary. When replacing the cap, the same choice of location as for removal, and a location near the valve, should again be selected to "knock on" the cap with the edge or heel of the hand.

N.B. It may be necessary to protect the hand during this operation. After this has been done ensure that the cap has been completely seated all round on each of the four locating nibs.



TRIM RINGS

On vehicles fitted with trim rings, in addition to the hub cap, the procedure for removal and refitment is the same, but care must be taken to ensure that the trim ring is not damaged by too vigorous use of the wrench.

Spare Wheel Stowage

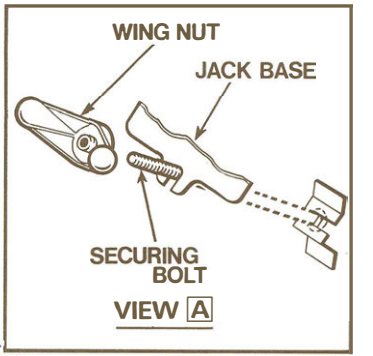
GENERAL NOTE

There are several methods of stowing the spare wheel and wheel changing tools. Refer following pages.

One of the variations illustrated will apply to your vehicle, and whether an optional tyre size is fitted.

Therefore, note should be taken of the illustration which is relevant to your vehicle and the instructions concerned, so that the least amount of difficulty is encountered in maintaining the correct installation.

Removal and Stowage of a wheel (except sports wheel).



TO REMOVE

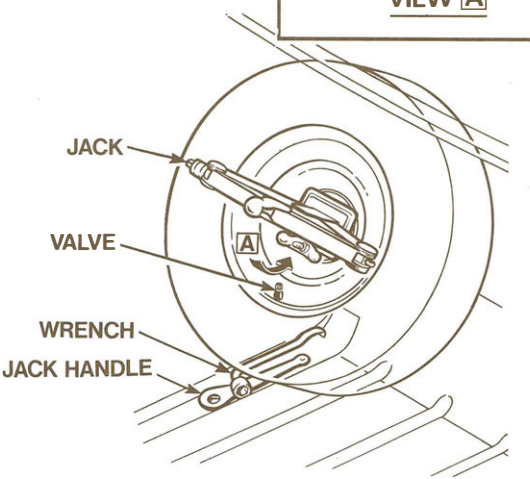
1. UNSCREW the wing nut and remove the Jack.
2. LIFT spare wheel off the bolt and then remove the wheel nut wrench and Jack handle.

TO REPLACE

1. PLACE the spare wheel over the securing bolt, using the lower-most bolt hole and with valve stem facing outwards, fit wing nut loosely.

   If difficulty is experienced in raising the wheel into position so that the securing bolt protrudes sufficiently, push in at the bottom of the wheel.

   NOTE: Where a 6″ wheel rim is used (e.g., ER70 tyres have a 6″ rim as standard), the procedure for stowage is the same, except that the Jack must be raised approximately 4 turns from the fully collapsed position, before securing the Jack to the spare wheel, due to the extra width of the tyre and wheel.
2. RAISE Jack approximately 2 full turns from the fully collapsed position and place Jack in centre of wheel with attaching lug on Jack facing downwards, then screw on wing nut over top of Jack.
3. PLACE Jack handle and wheel nut wrench under tyre as shown and tighten wing nut to secure installation.



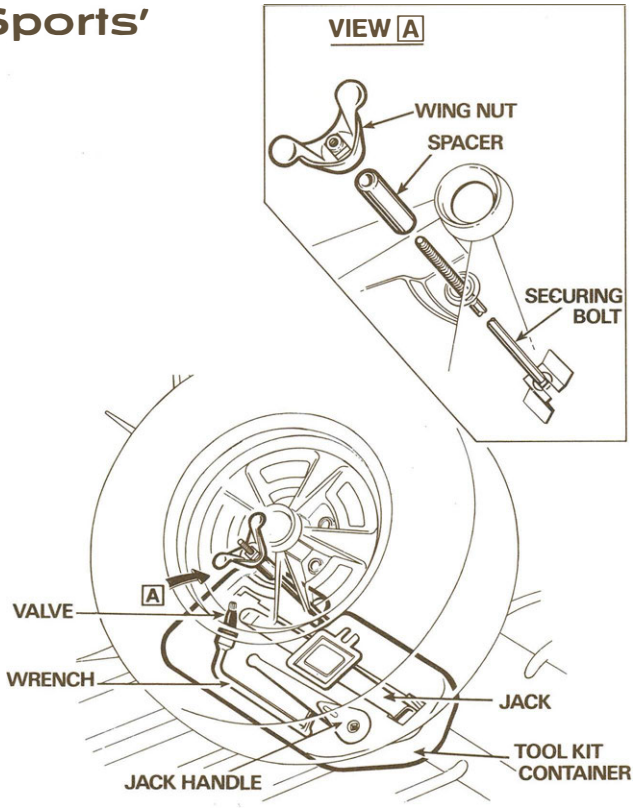
Removal and Stowage of 'Sports' type wheel.

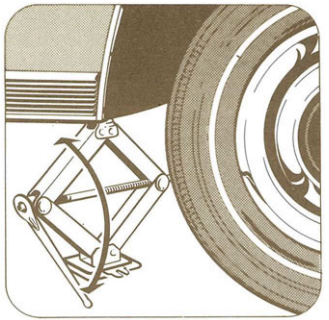
TO REMOVE

1. UNSCREW wing nut and remove spacer.
2. LIFT spare wheel off the bolt.
3. REMOVE and unpack tool kit container.

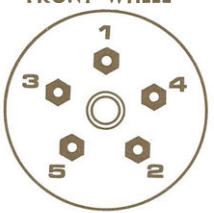
TO REPLACE

1. REPACK tool kit container with Jack fully collapsed and place kit under securing bolt.
2. PLACE spare wheel over securing bolt using the lowermost bolt hole and with the valve stem facing outwards. If difficulty is experienced in raising the wheel into position, so that the securing bolt protrudes sufficiently, push the wheel in at the bottom.
3. FIT the spacer and wing nut onto the securing bolt and tighten.

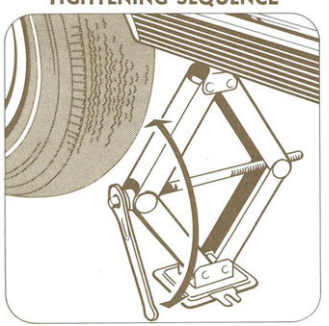




FRONT WHEEL



WHEEL NUT
TIGHTENING SEQUENCE



REAR WHEEL

JACKING PROCEDURE AND WHEEL CHANGING: SIDE-SILL JACK

The following instructions outline the procedure to be followed for jacking your vehicle.

WARNING: Under no circumstances get under vehicle while it is supported by the jack. Always use firm level ground, where possible, for jacking up the vehicle.

1. Apply the parking brake and ensure that the transmission is in REVERSE (Manual Transmission) or in PARK (Automatic Transmission).
2. Remove the spare wheel and tools (refer to previous pages for details). This will avoid disturbing the vehicle while it is resting on the Jack.
3. Place chocks of wood or stones etc. in front of and behind the wheel on the side opposite to the wheel which is going to be changed.
4. Set the Jack under the position required and raise the spherical head towards the vehicle. Check that the head is positively in the depression provided, by operating the Jack with the ratchet type handle.

   Front Jacking Positions. At the rear of the wheel opening, set in behind a body mounting access hole; the depression is in the frame member.

   Rear Jacking Positions. At the front of the wheel opening, set into the body sill; the depression is in the sheet metal.
5. Remove the wheel trim where necessary (refer notes on previous pages).
6. Loosen the wheel nuts slightly, but do not remove them.
7. Raise vehicle on the Jack by operating the Jack with the ratchet handle.
8. Remove the wheel nuts and avoid losing them or getting dirt on the threads.
9. Remove the wheel and change over with the spare.
10. Replace the wheel nuts (tapered faces against the wheel). Ensure that the wheel nuts fit into the tapered seats of the wheel stud holes.
11. Before tightening with the wheel nut wrench, each nut should be at least finger tight, then partially tighten the wheel nuts with the wrench evenly and firmly.
12. Lower the vehicle by operating the Jack handle after reversing the handle on the Jack, then reversing the direction of turning, until the wheel is partially supporting the vehicle and stops the wheel turning. Fully tighten the wheel nuts, using the sequence illustrated, then recheck the tightness in a circular sequence.
13. Refit the wheel trim (refer previous pages for details.)
14. Completely lower the vehicle and remove the Jack.
15. Stow the changed wheel into its proper position and place the Jack and wrench back in the vehicle, according to one of the illustrations provided on the previous pages.

SECTION—8

TRAILER AND CARAVAN HAULING

General Note

Tow-Bar Instructions

Automatic Transmission

Permissible Operating Loads

Tyre Pressures

Superlift Shock Absorbers

Driving Hints

Ensure that you operate within the Road Laws when towing a Trailer or Caravan.

GENERAL NOTE

It should be recognised by trailer and caravan users that all makes of non-commercial cars are designed and intended primarily as passenger conveyances. A trailer cannot be towed behind a passenger car without having some effect on safe operation, dependability and economy. Although the vehicle will pull a trailer as satisfactorily as other makes, maximum satisfaction and pleasure will be derived through use of proper equipment and by avoiding overloads and other abusive operation. During operation on the highways, allowances must be made for the additional weight and bulk of the trailer, and driving habits should be altered accordingly. Should you contemplate hauling a trailer or caravan, it is recommended that you follow our instructions covering weight limits, springs and tyres. This information is briefly covered on the following page.

TOW-BAR INSTRUCTIONS

As it is illegal to obstruct a clear view of the registration number plates, GM tow bars have been designed so that the ball and the attached tow bar tongue may be removed by undoing two (2) bolts. The bolts, ball and tow bar tongue can then be stowed in a safe place when not in use.

Care should be taken to ensure the bolts are sufficiently tight when this attachment is replaced for towing purposes, by using a 1″ S.A.E. ring spanner.

AUTOMATIC TRANSMISSION

When a vehicle equipped with Automatic Transmission is consistently used for towing heavy loads, it is recommended that the transmission should be drained and refilled with the recommended fluid at intervals of 12 months or 12,000 miles (20,000 km), whichever occurs first, to ensure that the additive level of the Automatic Transmission Fluid is maintained for heavy duty conditions.

Ensure 'DEXRON' fluid only is used for topping up and service refills (Refer to Page 80 for fluid level checking instructions).

PERMISSIBLE OPERATING LOADS

"A". Fitted with independently operated brakes acting on trailer wheels. "B". No brakes fitted to trailer.	"A"	"B"
Maximum Trailer Weight (Tare Weight plus all load)	**2000 lbs.**	**1100 lbs.**
Nominal Static Weight to be Imposed on the Vehicle Tow-Bar by the Trailer (10% of Trailer Weight)	**†200 lbs.**	**†110 lbs.**

†This weight must be included as part of the load carrying capacity of the vehicle.

These loads are quite in order when using a trailer or caravan in conjunction with approved GM Tow Bars under good, normal road conditions. However, it is strongly recommended that they should not be exceeded and that they be decreased proportionately when operating on bad roads or in mountainous areas. Any damage directly or indirectly caused by operating a vehicle and trailer or caravan with loads in excess of the above could void the warranty.

For complete details regarding caravan or trailer towing we recommend that you discuss your needs with your GM Dealer, who is fully competent to answer such queries.

TURN SIGNAL FUNCTION

Where a trailer unit is being towed that requires the use of Turn Signal Indicators a heavy duty type Turn Signal flasher unit should be fitted after checking with a GM Dealer.

TYRE PRESSURES

It is recommended that the towing vehicle be operated with tyres at maximum pressure. (Refer to Section 7.)

SUPERLIFT SHOCK ABSORBERS

For information regarding the pressures for the optional Superlift Shock Absorbers, refer to Section 7.

POWER ASSISTED BRAKES—
NEVER MOVE A VEHICLE AND TRAILER COMBINATION UNLESS THE ENGINE IS RUNNING.

DO NOT TAP INTO VEHICLE HYDRAULIC BRAKE SYSTEM FOR TRAILER BRAKES.

DRIVING HINTS WHEN TOWING

N.B. The use of Super-Lift Shock Absorbers should be considered if regular trailer or caravan operation is to take place.

1. Remember that a vehicle's acceleration, braking and ability to negotiate rough and/or winding roads, etc., are all impaired by the extra weight of a caravan or trailer. During summer time the desired performance should be gauged to avoid overheating the engine and transmission. Making a couple of short distance trial runs is a good way of regaining "the feel" of your caravan. This will eliminate surprises when you pull out of your driveway on the first leg of a long journey to a holiday resort.

2. Have your engine tuned up and spark plugs cleaned or replaced before you depart.

3. Equip your car on both sides with the extended arm rear vision mirrors necessary to see behind your caravan adequately.

4. Headlights should be re-aimed for correct settings after the trailing weight has been added at the towing ball and vehicle loading completed.

5. When descending steep grades, don't continually apply the brakes to maintain safe speeds. Instead, use a lower gear, permitting the engine to provide a portion of the required braking action.

   Automatic Transmissions — Refer Page 34 for use of **S** or **L** positions.

   Riding the brake pedal heats up the brakes and reduces braking effectiveness.

6. If your trailer runs off the paved highway surface on to the shoulder, resist the temptation to quickly turn the steering wheel to bring the trailer back on the road. Instead, allow the left wheels of the car to run off on to the shoulder too. Then, wait for a good opportunity to steer the car back onto the road. This will prevent an abrupt swerving reaction and will keep you in a traffic lane safely.

7. Keep your windshield clean, which also means keeping a regular check on the level of the windscreen washing solution container. (Refer Page 70 for Windshield Cleaning.)

8. Make sure the vehicle's radiator is not covered by insects.

9. **Be careful to observe all Road Laws, regarding trailer and caravan towing. e.g.**

   —Compulsory hitching chain between caravan and car.

   —Ensuring that the ball does not obscure the number plate on your vehicle when the caravan is not hitched.

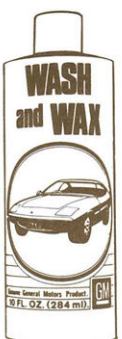
   —Keep the number plate on your caravan visible at all times.

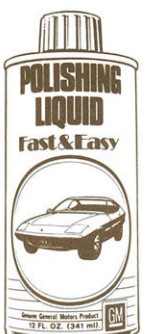
SECTION—9

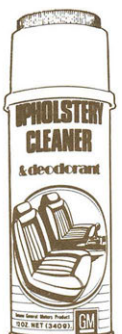
APPEARANCE POINTERS

CLEANING OF INTERIOR

CLEANING OF EXTERIOR







SUGGESTED SEQUENCE FOR WASHING AND POLISHING

A job always becomes easier when it is tackled in a systematic way, and car valeting is no exception. We suggest that if you set about the task of washing and polishing the car in the following sequence the best results will be achieved:—

1. Brush out and clean interior.
2. Carry out preliminary steps to washing.
3. Wash exterior.
4. Polish exterior and finish off.

Ask your GM Dealer for the recommended range of GM Quality Car Care Products.

CAUTION

When cleaning interior upholstery or carpeting, do not use products such as: lacquer thinners, carbon tetrachloride, enamel reducers, bleaches or reducing agents.

NEVER USE PETROL FOR ANY CLEANING PURPOSE INSIDE THE VEHICLE.

PAINT AND APPEARANCE ITEMS

Imperfections in paint, trim or other appearance items are normally apparent and corrected during New Vehicle Pre-delivery conditioning. Therefore, we suggest that if you find any paint or appearance imperfection, call it to the attention of your Dealer without undue delay as normal deterioration due to use and exposure is not covered by the New Vehicle Warranty.

Cleaning of Interior

GENERAL CARE AND CLEANING OF UPHOLSTERY

Dust and dirt particles which accumulate on the surface of the interior trim should be removed every few weeks — more often with constant hard driving. This can be done readily with a vacuum cleaner. Before attempting to remove spots and stains from an upholstery fabric, it is necessary to determine as accurately as possible:

1. The type of fabric,
2. The nature and age of the stain,
3. The effect of the stain removal agent upon the colour, structure and general appearance of the trim material.

It is essential that stains be removed from the trim material as soon as possible after they have been made. If they are allowed to remain on the fabric for any **length of time they very often become oxidised or set, and removal becomes difficult, if not impossible.**

CLEANING OF P.V.C. COATED FABRICS

Vinyl coated fabric (P.V.C.) is used for seating, headlining and auxiliary trimming. The grades used vary according to their function. P.V.C. fabrics are generally made with fabric bases upon which synthetic resins are applied. Care of P.V.C. fabric is a relatively simple but important matter. The surface should be wiped over with a dry cloth during the regular cleaning of the vehicle. Should dirt accumulate and become embedded in the material pattern the following procedure is recommended:

1. Using lukewarm water and soap, work up thick suds on a piece of cheesecloth, and apply to the surface. A soft bristled brush can be used to advantage to remove stubborn stains or dirt embedded in the grain of the material.

2. The operation should be repeated using only a damp cloth and no soap.
3. The trim should then be wiped dry with a soft cloth.

The above cleaning instructions also apply to the rubber mats and wheel covers where fitted in the luggage compartment.

IMPORTANT: Where stubborn stains on P.V.C. fail to respond to the above methods, a light application of GM Upholstery Cleaner and Deodorant (Part Number M37222) with a soft cloth will invariably prove satisfactory.

N.B. Do not use cleaner or white spirits excessively.

CLEANING OF NYLON-RAYON TRIM MATERIAL

Where the seats in your vehicle are upholstered with the Nylon-Rayon fabric, the following instructions should be observed.

Most loose dirt and dust can be removed by a vacuum cleaner or a soft brush (Do Not Use a Whisk Broom or a Coarse Hair Brush). Being treated with the scotchgard finish, normal soiling should not take place, but if this should occur, it is recommended that the fabric be sponged lightly with warm water containing a detergent, and a small amount of ammonia. The fabric should then be rubbed lightly, and if necessary, sponged again to remove anything stubborn. Soak up excess fluid with dry cloth. GM Upholstery Cleaner may be used to advantage, but should be used sparingly.

CLEANING CARPETS

Thoroughly brush or vacuum the carpet. In many instances the carpet may require no further cleaning. If the carpet is extremely soiled, thoroughly vacuum it to remove loose dirt; then using GM Car Care Upholstery Cleaner, clean approximately one square foot at a time. After each area is cleaned, remove as much of the cleaner as possible with a vacuum cleaner. After cleaning the carpet, use an air hose to "fluff" the carpet pile, then dry the carpet. After the carpet is completely dried, use an air hose to again fluff the carpet pile.

WOOD GRAINED INSERTS

Wood grained finish should be wiped over with a dry cloth during general cleaning of the vehicle. If further cleaning is necessary, lukewarm water and soap may be used. Dry the area thoroughly with a soft dry cloth.

CLEANING THE SEAT BELTS

Cleaning of the seat belts can be carried out by using a mild non-abrasive soap and lukewarm water. After washing be sure to thoroughly sponge the washing solution out of the belts.

NEVER USE A VOLATILE TYPE OF CLEANING FLUID ON THE SEAT BELTS.

GM QUALITY CAR CARE PRODUCTS

GM Quality Car Care Products available through an authorized GM Dealer for vehicle valeting operations include—

GM POLISHING CREAM
GM DEGREASER
GM WASH & WAX
GM POLISHING LIQUID
GM TYRE BLACK
GM UPHOLSTERY CLEANER & DEODORANT
GM MAN-MADE CHAMOIS
OPTIKLEEN

Optikleen in un-diluted form is recommended for removal of thick road film which, if not removed, smears and impairs vision when the windshield wipers operate over the windshield.

Cleaning of Exterior

PETROL CAUTION

If petrol is split on the paint finish when refilling, owners are advised to ensure that it is flushed off with clean water immediately.

The reason is that petrols currently in use have a tendency to stain or soften new car paint finish during the weathering out period, particularly when the vehicle is exposed to high temperatures.

Notes: 1. Calcium chloride and other salts, road oil and tar, tree sap, chemicals from factory chimneys and other foreign matter may damage any known automobile finish if allowed to remain in contact with the paint film.

2. Some chemical cleaners used for removing road oils and tars from painted surfaces have been found to be detrimental to acrylic finishes. When purchasing a cleaner, polish or wax, ensure that it can be safely used on an acrylic finish.

3. Grease and oil — and even tar if it's fresh — can be removed from the finish with a little petrol. As a precaution against staining, wash and polish as soon as possible the area from which the foreign matter has been removed.

PRELIMINARY STEPS

N.B.: Care should be used when moving the vehicle after washing, in case water has affected the brakes.

Frequent hosing and washing of the vehicle cannot be overstressed as the most effective precaution against corrosion. Other items requiring attention before washing the vehicle are as follows:—

Underbody Cleaning. It is most important that the underside of fenders, and underbody ledges, are thoroughly hosed to wash away mud deposits which retain moisture and eventually cause rust.

Cleaning the Optional Vinyl Top. The top should be washed frequently with neutral soap suds, luke-warm water and a brush with soft bristles. After the entire top has been cleaned, rinse with clear water to remove all traces of soap.

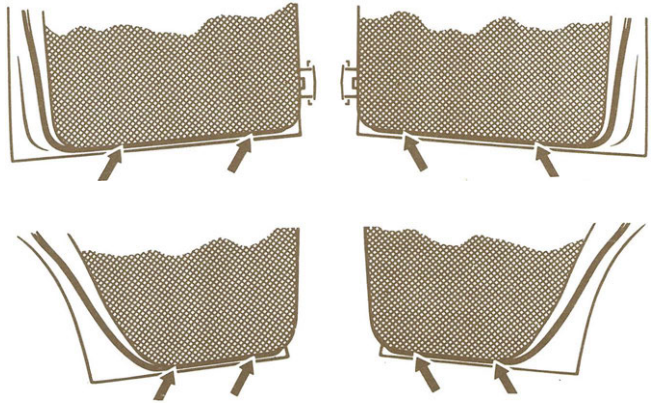
CAUTION: Do not use volatile cleaners or household bleaching agents on the vinyl top material.

Door Drain Holes. It is important that the drain holes at the bottom of the door panels (illustrated below) are checked to make sure that they are free of dirt and foreign matter, which could trap water inside the panels. Clogged drain holes can be cleared with a small screwdriver and these drain holes are angled back towards the rear of the vehicle.

Rocker Sill Vents

There are four slot vents which should be regularly checked to see that they are clear of blockage. Use a blunt ended instrument so as to avoid breaking the paint surface.

These slots are formed as cut-outs in the sheet metal along the bottom edge of the rocker sill, being evenly placed between the front and rear wheel arches and face inward, towards the centre of the vehicle.



Glass. Special care should be taken to avoid scratching the glass when it is being cleaned. If it is cleaned at the same time as the rest of the car, there is a possibility that particles of grit will cause fine scratches. An accumulation of these on the windshield can make night driving very unpleasant. Flush off any heavy mud deposits on the glass when washing the body, but leave the final cleaning and polishing until afterwards.

Each section of glass should then be washed in turn, making sure that the water, its container and the sponge are quite clean and free from grit. If the glass is very dirty, a little household ammonia mixed with warm water will help. Clean old linen cloth is better than new material for polishing glass.

INSECT SPOTS

Insect spots on the paint finished parts of the vehicle can be easily washed off by using a solution containing two quarts of water in which ½ pound of baking soda (Bicarbonate of Soda) has been dissolved. Flush the washed parts with clean water. After washing and drying, park the vehicle in a shaded area.

WASHING

The acrylic lacquer finish on your car is superior to ordinary lacquers and will stay bright and new looking for years with little or no polishing, provided it is given a reasonable amount of regular washing to keep off the road grime.

To preserve the original paint finish of the vehicle, it is essential that it is kept clean by frequent washing. Washing not only removes dirt and road grime that settles on the vehicle, but also dilutes acids which accompany such grime; in particular, salt from air or sea spray encountered in coastal areas which often become trapped in crevices. Tree sap, road tar, excretion from insects and industrial fall out often contain harmful chemicals and other foreign matter that may permanently damage the paint finish of the car. These should be removed without delay, using an effective removal agent.

REGULAR WASHING

If the vehicle is in continuous use, it should be washed at least once a week with either cold or warm water (preferably running water), using clean chamois leathers, sponges or rags free from dirt or grit likely to scratch the paint finlsh. It is good practice to first hose the vehicle to remove as much of the grit and grime as possible before swabbing the surface. Do not wash the vehicle under bright sunlight when high temperatures are being experienced, as this will result in a streaky, watermarked finish.

GM Wash and Wax (Part Number M37226) loosens road grime to make washing easier and leaves palnt shining clean.

TYRES

Sponging with cold water is all that is necessary for normal cleaning of the tyres. Oil and grease can — and should — be removed with soap and water or detergent. For tar or other substances, a mild abrasive, such as mechanics' hand soap or kitchen cleaning powder, may be used if necessary. Thoroughly wash the tyres with water to finish. Petrol must not be used for cleaning tyres.

New tyre look can be restored by using GM Tyre Black (Part Number M37227) supplied in easy-to-use applicator.

CARE OF WHITE OR RED SIDE WALL TYRES

Road grime and kerb marks may easily be removed by use of a mild soap, or detergent, warm water and a stiff brush. Do not use petrol, kerosene or any oil products that will discolour the side walls and deteriorate the rubber. Thoroughly rinse with water to remove cleanser.

POLISHING

Even though the acrylic lacquer finish on your car is more durable than ordinary lacquers, under certain conditions you may wish to polish your car to provide maximum protection against road dirt and industrial fall out etc.

Also, the application of a polish may be required to remove foreign matter which is not normally removed from vehicles by washing. Over a period of time, such foreign matter may build up on the paint surface to the detriment of its overall appearance.

Do not attempt to apply a polish without first washing to remove existing loose grit, surface dirt, dust or grease, etc.

Either GM Polishing Liquid (Part No. M37221) or GM Polishing Cream (Part No. M37220) will quickly and easily impart a deep, rich shine when used as directed on the container.

PAINT WORK INSPECTION

Regular inspection of the vehicle should be made for scratch marks, cracks or damaged areas, all of which could develop rust and thus affect paint finish. Any deep scratches, cracks or breakdown in the finish should be repaired without delay. Care should be taken to ensure that any rusting is counteracted immediately, otherwise rust "creep" will extend beyond the damaged area. This applies particularly in sub-tropical areas or coastal districts, where the moist or salt-laden atmosphere accelerates rusting if it is allowed to develop through neglect. The paint finish of the vehicle gives a very high degree of protection against the weather, but it should be realised that wear and deterioration occur when the car is exposed to elements for prolonged periods.

The vehicle therefore should be garaged whenever possible.

CHROMIUM PLATED PARTS

Generally, a rub with a clean soft cloth will be all that is necessary to remove dust from the chromium plated parts. However, if the chromium is covered with dead insects or mud, it should be washed with warm soapy water and then cleaned with GM Polishing Liquid (Part Number M37221). This polish should also be used if the chromium shows signs of tarnishing. Do not use ordinary metal polishes as they may contain abrasives which would ruin the plating.

GENUINE GM REPLACEMENT PARTS AND ACCESSORIES

GM Parts & Accessories Division of General Motors-Holden's Pty. Ltd., is established to distribute Genuine GM Parts through Authorized GM Dealers located throughout the Commonwealth from whom you can obtain new parts as required.

Genuine GM Parts are manufactured to the high standards of quality established for General Motors cars—to the correct specifications and of the same materials as the original parts on your car. They are, therefore, guaranteed, and it is definitely to your interest to specify them.

SECTION—10

GENERAL MAINTENANCE

Engine Lubrication—
- **Initial Oil Fill**
- **General Information**
- **Maintaining Oil Level**
- **Oil Filter Replacement**
- **Oil Consumption**
- **Oil Change Intervals**
- **Oil Viscosity Recommendations**
- **Windshield Notes**
- **Cooling System**
- **Battery**
- **Removal of Lamp Bulbs**
- **Spark Plugs**
- **Fuses and Circuit Interruptor**

ENGINE LUBRICATION

INITIAL OIL FILL

Your engine has been filled with a high quality SAE 20W 'SE' oil before leaving the factory. It is unnecessary to change this oil prior to the recommendation given under "Engine Oil Change Intervals".

GENERAL INFORMATION

The oil to be used once this initial fill oil is removed must be a high quality lubricating oil, marked 'SE' and passing vehicle manufacturer's tests. The oil change interval and the new vehicle warranty are based on the use of oils that meet these requirements.

NOTE: *Non-detergent and other low quality oils are specifically not recommended. The use of "break-in" oils, "tune-up" compounds, "friction-reducing" compounds and other supplemental additives is not recommended. Their use will only increase operating costs.*

REMEMBER: *The use of proper engine oils and oil change intervals are your best assurance of continued reliability and performance from the engine of your vehicle.*

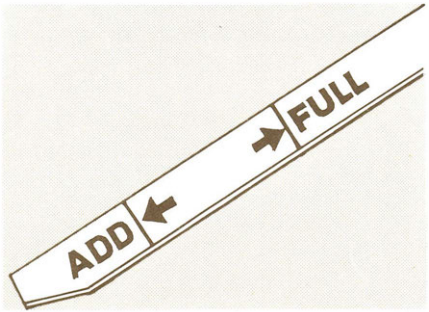
MAINTAINING ENGINE OIL LEVEL

The oil level indicator is marked ADD and FULL. The oil level should be maintained between the two markings, neither going above the FULL marking nor under the ADD marking.

Check the oil level frequently and add oil when necessary. To check the oil level accurately, the vehicle must first be on level ground and the engine should be stopped for at least ten minutes. Checking the oil level too soon after stopping the engine will not allow sufficient time for oil which has circulated to the upper parts of the engine to drain back into the engine oil pan, and consequently, a false low reading will be obtained. Topping up under these conditions will result in the oil pan being over-filled.

Remove the indicator, wipe it clean with clean cloth or paper before re-inserting it firmly. Pause for a second, then withdraw the indicator to check the reading of the oil level.

OIL LEVEL INDICATOR



6 Cylinder Engine Type

The distance between the ADD and FULL marks represents:

2 pints on all 6 cylinder engines; 2 pints on 253 and 308 V8 engines; 1½ pints on 350 V8 engines.

Oil level should be checked more often during the running-in period since somewhat higher oil consumption could be experienced until piston rings become seated.

ENGINE OIL FILTER REPLACEMENT

The full-flow oil filter, with non-return check valve, filters all the engine oil delivered by the oil pump. For this reason the interval of filter change is very important.

The oil filter should be replaced every six months or 6,000 miles (10,000 km) whichever occurs first, Independent of oil change intervals.

Under prolonged dusty driving conditions it is recommended that the oil filter be replaced more often.

NOTE: After the oil filter has been replaced, additional oil must be added:—

6 Cylinder Engines (All) — 1.5 pints
8 Cylinder Engines (All) — 1.5 pints

Always use the recommended brand of oil filter for replacement purposes.

ENGINE OIL CONSUMPTION

In many cases, it is erroneously thought that engines should not use any noticeable amount of oil between oil changes. In actual fact every internal combustion engine should use a certain amount of oil to act as a lubricating and cooling agent, especially during the running-in period.

There are several factors that contribute to oil consumption, apart from mechanical malfunction, that should be noted, and these are: the type of oil, the seating of piston rings, the oil level, and the conditions under which the vehicle is operated.

RUNNING-IN. The initial factory-fill oil should remain in the engine for the recommended period. (Refer this section.) Oil consumption may be high during the running-in period.

LUBRICATION. An engine is dependent on oil to lubricate the cylinder walls, pistons, rings and valve stems. A film of oil is left on the cylinder walls and burned on the next firing stroke while the film on the valve stems is drawn into the combustion chamber and burned. These quantities, while small, explain why an engine does use some oil.

OIL LEVEL. Maintaining a proper oil level is also an important factor in controlling oil consumption. An overfull crankcase allows the reciprocating parts of an engine to splash oil on to the cylinder walls in quantities greater than the piston rings can control. This excess oil will be drawn into the combustion chambers and burned.

Overfilling the crankcase can result if the oil level indicator markings are not understood. (Refer to previous notes.)

DILUTION. Probably the most prevalent complaint of oil consumption comes from the motorist whose vehicle is driven at below normal operating temperatures for long periods of time. The oil becomes diluted by fuel and moisture which settle in the crankcase, raising the oil level and creating a false reading on the oil level indicator. For example, in a vehicle that has accumulated 1,000 miles (1,500 km) of city operation and has consumed a normal amount of oil, the level may not have dropped from the FULL mark, due to dilution. If this vehicle is then driven for some distance at highway speeds on a warm day, the dilution elements evaporate, lowering the oil level and the motorist assumes the oil is being lost.

SPEED CONSUMPTION. Sustained high engine speeds will increase oil consumption because higher speeds increase engine temperatures which lower oil viscosity and allow more oil to reach the combustion chamber.

If it is considered that the above possibilities can be accounted for but excessive oil consumption appears to continue, then it is recommended that you discuss the situation with your GM Dealer.

ENGINE OIL CHANGE INTERVALS—ALL ENGINES

The engine oil change interval is dependent on the type of operation of the vehicle and on the climatic conditions in which it is operating. The chart given below indicates the change interval recommended for normal operating conditions.

NOTE: ONLY 'SE' GRADE OIL SHOULD BE USED.

NORMAL OPERATING CONDITIONS

PREVAILING DAYTIME TEMPERATURE	REGULAR OIL CHANGE INTERVAL
ABOVE 50°F. (10°C)	EVERY 90 DAYS OR 3,000 MILES (5000 km) —WHICHEVER OCCURS FIRST.
BELOW 50°F. (10°C)	EVERY 30 DAYS OR 3,000 MILES (5000 km) —WHICHEVER OCCURS FIRST.

ABNORMAL OPERATING CONDITIONS — EVERY 30 DAYS OR 3,000 MILES (5,000 km)

Under prolonged dusty conditions it is recommended that oil changes be made more often than shown in the table. Long runs at high speeds with the resultant high engine operating temperatures may oxidize the oil, forming sludge and varnish. While no definite drain intervals can be recommended under these conditions, they should be carried out more frequently than under normal driving conditions.

However, owing to present day operating conditions, more vehicles are at the other extreme, that is, they are driven so that they seldom have the opportunity to attain and maintain efficient engine operating temperatures. This applies to city and suburban driving, where short distances are travelled. Under severe conditions such as these, sludge forms in the engine more readily, thus necessitating more frequent oil change intervals.

Where the above operating conditions are experienced, the recommended change interval is 30 days or 3,000 miles (5,000 km), whichever occurs first.

ENGINE OIL VISCOSITY GRADES—ALL ENGINES

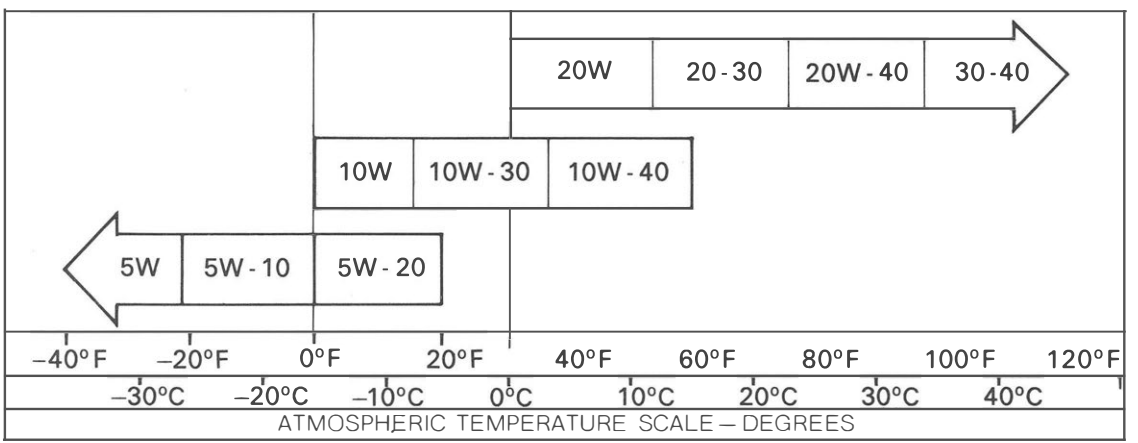
NOTE: ONLY 'SE' GRADE OIL SHOULD BE USED.

The grade of crankcase oil should be selected to give the best performance under the climatic and driving conditions in the territory in which the vehicle is driven. When the crankcase is drained and refilled, the crankcase oil should be selected, not on the basis of the existing temperature at the time of the change, but on the atmospheric temperature range anticipated for the period during which the oil will be used.

During warm or hot weather, an oil which will provide adequate lubrication under high operating temperatures is required.

During the colder months of the year, an oil which will permit easy starting at the lowest atmospheric temperature likely to be encountered, should be used.

The chart below will serve as a guide in selecting the proper SAE viscosity grade of oil.



SUSTAINED HIGH SPEED DRIVING NOTE-USE ONE OF THE FOLLOWING S.A.E. GRADES: 20-30; 20W-40; 30-40.

WINDSHIELD NOTES

WINDSHIELD CLEANLINESS

It is imperative, at all times, that the windshield surface be maintained in a clean condition so that the wiper blades may be as effective as possible in wiping clean the surface. Use of the windshield washer and Optikleen washer solvent will assist in removing dirt and dust particularly when driving at a time when no rain is falling; however, every opportunity should be taken to wipe or wash the windshield by hand (most Service Stations have such a service today as a courtesy item). Abrasive materials must never be used to remove a build-up of road scum, etc., as a scratched windshield will cause difficulty in achieving proper vision, particularly in night driving. Therefore, after the windshield has been cleaned with a wet sponge etc., it should be wiped dry with a soft, lint free cloth or even a ball of newspaper.

WINDSHIELD WIPER BLADES — CLEANING

Much of the oily road scum thrown up onto the windshield glass, causing smearing when the wiper is switched on, transfers onto the wiper blade. Many owners, whilst they methodically clean the windshield glass, omit to clean the wiper blades and consequently smearing of the glass reappears immediately the wiper blades are set in motion.

The blades can be cleaned by simply lifting them off the windshield glass and then using warm water and a recognised car washing fluid.

If so desired, the wiper blade can be removed from the arm for cleaning purposes by simply disengaging it from the arm in accordance with the following instructions:—

1. Lift the wiper arm and blade off the windshield glass with one hand.
2. While holding the wiper arm with the one hand, relieve the pressure of the spring loading at the centre of the blade assembly by pushing down the spring with a blade (e.g.: a small screw-driver). This will disengage the spring from the stepped section of the pivot pin on the arm.
3. While the central spring is held down the blade assembly may be slid off the pivot pin.
4. To replace the blade assembly, hold the central spring 'down' as required to achieve the complete re-seating of the spring in the recess of the pivot pin.

WINDSHIELD WASHER RESERVOIR

A plastic reservoir containing liquid for the windshield washer is mounted in the engine compartment. It is suggested that when checking the radiator coolant level, the washer reservoir be checked also. For a crystal clear view Optikleen Washer Solvent (Part Number M37068) can be used by adding from the graduated container, 5 fluid ounces for every pint of water.

WIPER BLADE CAUTION

Do not operate the wiper blades by hand as this may damage the wiper drive mechanism.

In dry conditions, if the wiper blades are used to clean dust and dirt from the windshield always use the washer system to wet the windshield. Ensure that the windshield washer reservoir is checked regularly all the year round.

Should the wiper blades be frozen to the windshield, it is imperative that they be lifted off and freed by hand before switching on the windshield wiper system.

COOLING SYSTEM

The function of the cooling system is to keep the engine at its most efficient operating temperature under all driving conditions.

The coolant level should be maintained at one inch below the bottom of the filler neck. Do not over-fill as this will result in loss of coolant through the overflow pipe, unnecessarily.

Care and proper servicing of the cooling system is necessary to maintain its maximum efficiency.

RADIATOR CAP CAUTION

With the radiator pressure cap fitted, the cooling system can function at a temperature in excess of 212° F. without boiling. Therefore, if the cooling system is hot, the radiator cap must not be removed quickly — it should be rotated slowly to the first stop, which permits the pressure to release slowly through the overflow pipe. The cap must not be removed completely until all the pressure is released, consequently, it is advisable to cover the cap with a cloth as protection against steam. Unless this precaution is taken the coolant may boil when pressure is released and some of it be ejected from the filler neck of the radiator, causing injury to persons or damage to the car finish.

Never pour cold water into the radiator when the coolant is extremely low and the engine is hot. Such a sudden change in temperature may result in cracking the water jackets. It is advisable to allow the hot engine to cool for ten or fifteen minutes, then run the engine at idle speed while slowly adding water.

Where a 350 engine, air conditioning and/or the heavy duty radiator is used, a 15 lb./sq. in. radiator pressure cap is fitted.

FILLING THE COOLING SYSTEM

Running an engine with the coolant level low enough to cause boiling will result in engine damage. The coolant level should be checked when the engine is cold and then only enough water should be added to bring the level to approximately one inch below the bottom of the filler neck.

DRAINING AND FLUSHING

At 6,000 miles (10,000 km.) or 6 months, then at 12,000 miles (20,000 km.) or 12 months and thereafter every 12,000 miles (20,000 km.) or 12 months — Drain and flush the cooling system and add inhibitor. Refer Page 72.

To completely drain the cooling system, carry out the following steps:

Radiators: Loosen the cap. Unscrew the drain cock at the bottom of the radiator.

Engines: **6-Cyl.** Remove the hex. head plug on the L.H.S. towards rear of cylinder block.

8-Cyl. Remove the hex. head plugs midway along each side of cylinder block, above oil pan flange.

REMEMBER TO REPLACE AND PROPERLY TIGHTEN AT ALL DRAIN POINTS BEFORE REFILLING.

Do not use cleaning chemicals to loosen scale unless the cooling system is afterwards thoroughly reverse flushed, otherwise loosened scale will clog the radiator water passages.

For complete removal of loose sediment and sludge from the radiator and water jacket, pressure flushing with an air and water gun is recommended, and as this method of flushing requires special equipment we suggest you have this work carried out by your GM Dealer.

COOLING SYSTEM ADDITIVES

COOLING FLUID CAUTION

The radiator coolant contains a rust inhibitor which is toxic. Should an emergency arise where drinking water is required, the radiator coolant must not be consumed under any circumstances. In addition, care should be taken to prevent the fluid coming in contact with clothing or the exterior finish of the vehicle as it could cause a stain. If any fluid is splashed on the finish, flush immediately with clear water.

CORROSION INHIBITOR: HN-1109 (Part No. 2822485)

It is recommended that engine coolant system corrosion inhibitor HN1109 be added as follows after regular draining:

6 Cylinder Engines (ALL) — *4 fluid ozs.

8 Cylinder Engines (253 & 308) — *5 fluid ozs.

8 Cylinder Engines (350) — *6 fluid ozs.

*The amount of inhibitor specified is sufficient when used in water which is fit for human consumption.

Where other water, such as borewater, has been used in an emergency, immediately it is possible, drain and flush the cooling system and refill using clean water and the recommended quantity of corrosion inhibitor.

Ensure that the correct mixing instructions are observed when adding the corrosion inhibitor.

MIXING INSTRUCTIONS — RADIATOR INHIBITOR

The recommended quantity, for the particular engine, should be added to a bucketful of water and stirred before pouring the water into the radiator. Then complete the filling of the cooling system with water. It is not recommended that water be added to a container, into which the inhibitor has first been poured.

COLOUR INDICATIONS

Initially, the inhibitor will cause a pale transparent green coloration to the water. After some time the coloration may change to greenish-yellow. In either case, these colours indicate that the cooling system is being protected by the inhibitor.

NEW RADIATOR PROCEDURE

Where a new radiator is fitted, the inhibitor used for the first 6 months or 6,000 miles (10,000 km) should be J.1 (Part No. 7426874), then after draining the normal inhibitor HN1109 (Part No. 2822485) should be used.

USE OF ANTI-FREEZE FLUID

The recommended anti-freeze fluid is permanent type (ethylene glycol) GM 1899M, which can be obtained through your GM Dealer who, before adding, should make a thorough check of the cooling system.

NOTE: *Anti-freeze provides the action of a corrosion inhibitor, eliminating the necessity for a separate additive.*

Where a vehicle is to be parked overnight or operated for any length of time in regions where temperatures of 32°F. or below are encountered (e.g.—snow areas), the recommended brand of anti-freeze fluid should be used in the cooling system in accordance with the instructions specified.

COLD WEATHER DRAINING. If the recommended brand of anti-freeze fluid is not available, the radiator, and cylinder case, MUST be drained before parking to prevent the possible bursting of the radiator, or cracking of the cylinder block which can occur if the coolant freezes.

Heater Caution: Draining of the main radiator and cylinder case assembly will not drain the water out of the heater radiator; therefore, the use of Anti-Freeze will eliminate the risk of a damaged heater core.

BATTERY (12 Volt)

The battery is located in a metal cradle mounted on the left hand fender skirt in the engine compartment and the negative (—) terminal is "grounded". Never disconnect the battery or generator when the engine is running. Always connect Positive (+) to Positive (+), Negative (—) to Negative (—) whenever a battery charger is used.

FLUID LEVEL. The battery fluid level should be maintained at the correct distance above the plates (i.e. approx. ½ in.) by adding distilled water.

Distilled water will be required more frequently in summer than in winter. It is a good plan to check fluid level at least once a week in summer and every two weeks in winter. When long daylight runs are made, water must be added still more frequently. Keep all battery terminals clean and tight.

EMERGENCY STARTING WITH AN AUXILIARY (BOOSTER) BATTERY

To start the vehicle when the battery is discharged, use a single auxiliary battery of the same nominal voltage as the vehicle battery fitted with "jumper" leads of ample length.

CAUTION: Never expose a battery to open flame or electric spark. Battery action generates hydrogen gas, which is flammable and explosive. Don't allow battery fluid (electrolyte) to contact skin, eyes, fabrics, or painted surfaces. The fluid is a sulphuric acid solution. Wear eye protection when working with a battery.

FREEZING NOTE: Do not attempt to use a booster battery through a vehicle battery in which electrolyte is found to be frozen after inspection and where ambient conditions may produce this condition.

Where the booster battery is in another vehicle, do not allow the vehicles to come in contact.

1. Apply the parking brake.
2. Select a transmission shift lever position:
   —Manual Transmission — NEUTRAL.
   —Automatic Transmission—PARK.
3. Turn off all electrical functions.
4. Cover the filler holes of each battery with a cloth, after removing the filler caps.
5. Make a positive to positive contact between the booster battery and the vehicle battery. (The positive terminal can be identified by being painted **red**, or having a '+' sign, or 'P' stamped in the area of the terminal.)
6. Attach one end of the other lead to the negative terminal. (The negative terminal may also have '—', or 'N' stamped in the area of the terminal.)
7. Only connect the other end of the negative lead to one of the following appropriate locations, which must be over a foot away from the battery and from interference from any moving items, after the engine starts, so that disconnection can be safely made—

   Engine Negative (Earth) Lead Contact Points

   6 Cylinder Engines:
   Earth lead connection point on the cylinder head.

   253 and 308 V8 Engines:
   Throttle return spring retainer at the top front of the engine.

   350 V8 Engines *without* Air Conditioning:
   To the alternator spacer tube located at the front of the cylinder head (Driver's side).

   350 V8 Engines with Air Conditioning:
   To the rear mounting clamp bolt of the compressor (Passenger's side).

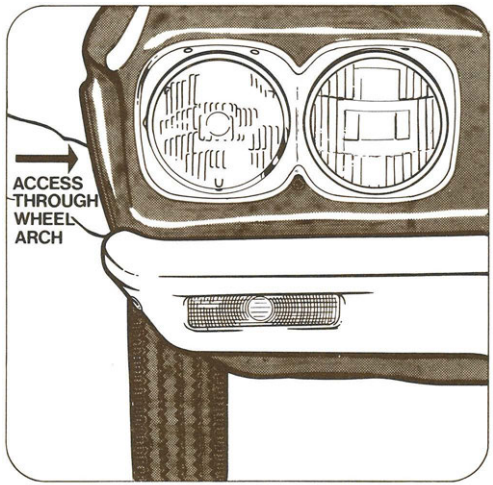
Reverse steps 4, 5 and 6 when removing the jumper leads, and discard the cloths used to cover the batteries.

Removal of Lamp Bulbs—Exterior

(REFER PAGE 86 FOR BULB SPECIFICATIONS)

FRONT TURN SIGNAL LAMPS

To replace the bulbs in these lamps, pull back the plastic boot located in lamp body at rear of bumper bar, turn socket anti-clockwise and remove. It is then possible to extract bulb from socket and replace with bulb specified. To replace, insert socket into aperture and turn clockwise to lock, then refit the boot.



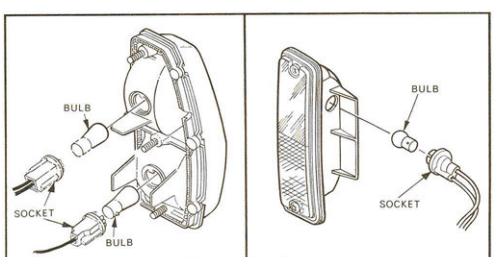
PARKING LAMP BULBS

These are mounted in a twist type socket located in the headlamp socket at the back of the headlamp. Removal of the bulb is by pulling it straight out from its socket. (4 Headlamp systems — fitted to outer headlamps.)

TAIL, STOP, TURN SIGNAL AND BACK-UP LAMPS

To replace these bulbs, access to the retractable bulb sockets can be gained at the rear of the lamp body in the luggage compartment.

The bulb can be removed by retracting the socket, and the specified bulb removed and replaced. Care should be taken to ensure that the socket is firmly pressed into place and is aligned with the locating rib.



SIDE MARKER LIGHTS

The rear of the lamp body is accessible from inside the luggage compartment. The bulb is held in the back of the lamp body by a snap-fit holder. After the holder has been pulled out, the bulb may be changed.

When replacing, ensure the holder is squarely and evenly mounted in position.

Removal of Lamp Bulbs —Interior

(Application subject to model or accessory selection.)

INSTRUMENT BULBS

The illuminating bulbs for the instrument panel are located along the upper outer edge of the instrument shroud. There are four (4) bulbs, each separately located and covered.

To change a bulb, undo the cross-head screw at the R.H. end of the bulb filter/cover, then remove by lowering and moving it towards the right, exposing the bulb.

To remove all-glass bulb, which points down and towards the driver, simply pull straight out.

Reverse the procedure to replace, making sure the locating tabs of the filter/cover are inserted into the opening first, before securing the other end with the screw.

N.B.: *Return each filter/cover to its original position as there are two types.*

DOME LAMP

Prise the lens off the rim (a thin blade may have to be used along either long side). The bulb is then accessible for removal and replacement. After changing the bulb snap lens back into rim.

FOOTWELL LAMP BULBS

The front courtesy lamp bulbs are positioned openly under either side of the front instrument panel, the bulbs being normal types.

REAR QUARTER LAMP BULBS

The upper rear quarter courtesy lamp bulbs may be removed after using the procedure as described for the Dome Lamp.

INSTRUMENT PANEL COMPARTMENT BULB

The bulb is easily accessible when the compartment lid is down and it is located on the top right hand side of the compartment.

LUGGAGE COMPARTMENT BULB

The bulb is mounted at the rear of the compartment on the top right hand side.

CAUTION: It is the owner's responsibility to check all lamps, signalling systems and warning lights frequently to be sure they are working properly. Headlamp aim should be checked periodically.

It is important that any malfunctions be corrected promptly for your safety, and for the safety of others.

SPARK PLUG CHART

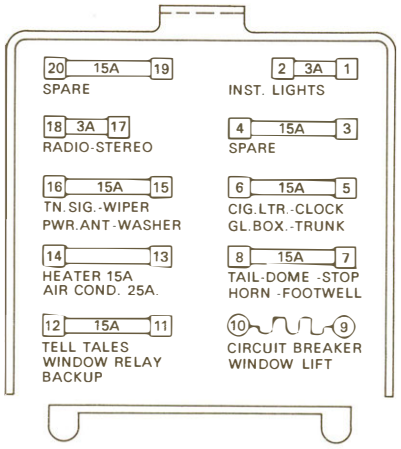
SPARK PLUG GAP (All) — .035 in.

Number of Cylinders	6	6	8	8
Cubic Capacity	173	202	253/308	350
Normal Operation	AC-44T	AC-45T	AC-44T	AC-R44TS
High Speed Operation	AC-43T	AC-44T	AC-43T	AC-R43TS

CAUTION: *It is important that any departure from the normally recommended spark plug should not be made until the matter has been discussed with your GM Dealer.*

FUSE SYSTEM

Fuses are retained in moulded block with flush fitting black plastic cover located under instrument panel on right side of steering column. (For Fuse Specifications, refer Section 12.)



FUSIBLE LINK — Refer to Section 1 for details.

CIRCUIT INTERRUPTOR.

The headlamps and parking lamps are protected by a bi-metal thermal element circuit breaker incorporated in the light switch. When the current load is too heavy, owing to a short circuit, the circuit breaker opens and closes rapidly, reducing the current sufficiently to protect the wiring from damage. This action continues until the cause is eliminated.

This is an important safety feature, for should a short circuit occur, the lights are not in most instances completely extinguished, as is the case when a fuse burns out. During this action of the circuit breaker, there is usually sufficient light to permit the car to be driven to the nearest service station.

SECTION—11

MAINTENANCE CHARTS

BODY MAINTENANCE CHART

Normal use of a car causes metal-to-metal movement at certain points in the body. Noise, wear and improper operation at these points will result when a protective film of lubricant is not provided.

Servicing and lubrication of the undermentioned points should be an integral part of lubrication service and should be carried out as required every 3 months or 3,000 miles (5,000 km).

POWDERED GRAPHITE
(Apply through key aperture)

Door Lock Cylinder
Rear Compartment Lid Lock Cylinder
Instrument Panel Compartment Lock Cylinder

NON-STAINING GREASE OR ZINC OXIDE GREASE
(Use sparingly on parts likely to be contacted by clothing)

Engine Hood Catch & Lock
Door Locks and Glove Box Lid Hinges
Engine Hood and Door Hinges

NASCO SOLIDOIL

Door Lock Striker Plates and Bolts

WARNING: Remove all lubricants that may have lodged on the paint finish.

CHASSIS MAINTENANCE CHART

REFER TO THE FOLLOWING PAGES FOR THE INFORMATION RELATED TO EACH ITEM.

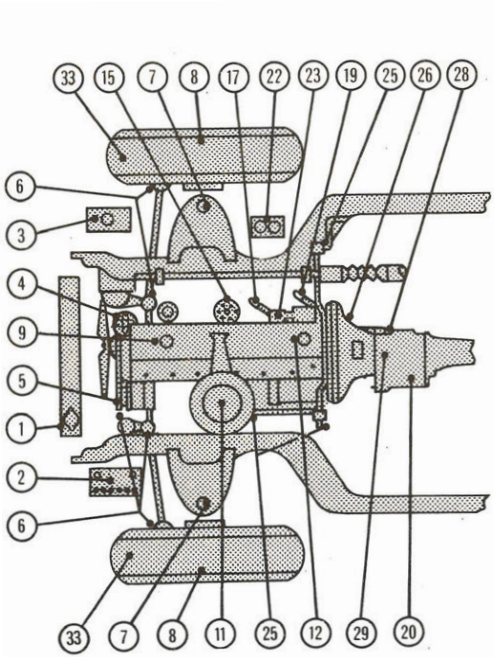
TIME/DISTANCE PERIODS

Each period has a time/distance relationship of 1,000 Miles (1,500 km) being equivalent to One Month and the completion of the first interval should be used; for example 6-6(10) is every 6 months or 6,000 miles (10,000 km).

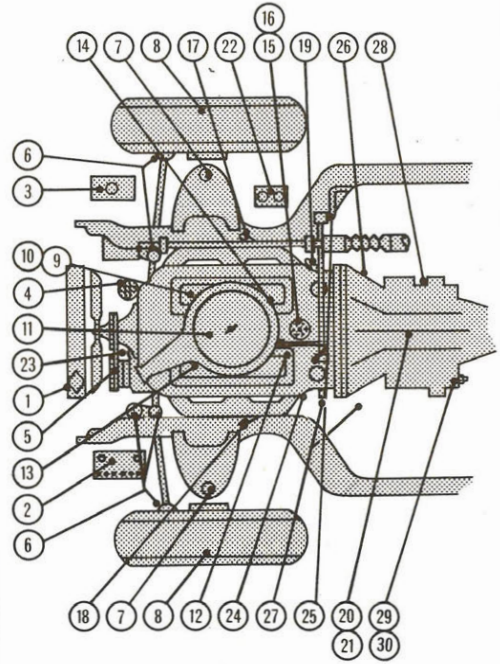
While these items are listed in the Owner Guide for checking every service, i.e. 3-3(5) regular checks are advisable on a weekly basis:

Tyre Inflation Pressures
Engine Oil Level
Radiator Coolant Level
Windshield Washer Level
Battery Electrolyte Level

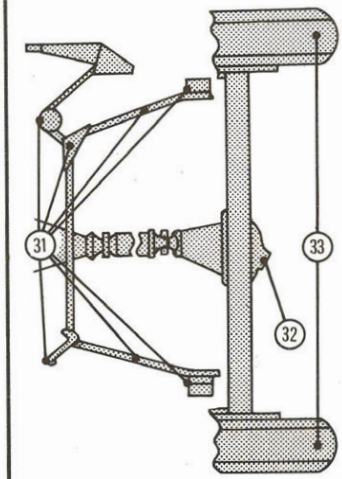
Chassis Maintenance Chart—Reference Points



6 Cylinder Engines



8 Cylinder Engines



Parking Brake/Rear Axle

CHASSIS MAINTENANCE CHART

Item	Number	Period	Instruction
Radiator Coolant Level	1	Check 3 - 3(5)	Check level of Coolant and maintain at 1" below filler neck. Also refer to Pages 71 and 72 for notes regarding general care and cautions.
Battery Electrolyte Level	2	Check 3 - 3(5)	Check the terminals and their condition. Also, clean the top if necessary. Check the level of the electrolyte and, if necessary, add sufficient distilled water for topping up to the correct level above the plates, i.e. ½" above the separators. (Refer also to Page 73 for further notes.)
Windshield Washer Reservoir Level	3	Check 3 - 3(5)	Maintain fluid level and also retain solvent concentration. (Refer Page 70 for further notes.)
Power Steering Reservoir Level	4	Check 3 - 3(5)	Top up with DEXRON automatic transmission fluid. Use the level indicator to check the fluid level. ONLY FILL WHEN OIL IS HOT, WHEELS STRAIGHT AHEAD AND ENGINE NOT RUNNING.
Engine Drive Belt Tension	5	Check 3 - 3(5)	To check the tension, while the engine is **switched off,** press in the belt between the pulleys. The depression should be approximately ½ in., using moderate thumb pressure. However this is an approximate guide. Your GM Dealer is able to correctly tension the belts with a tension gauge, particularly as different belts must be tensioned to particular specifications.
Steering Joints and Idler Arm Pivot	6	Lube 3 - 3(5)	Lubricate with E.P. Type Lithium grease to GM Specification 9985038 wherever possible. Otherwise always ensure that a high quality grease of suitable type is used.
Steering Ball Joints	7	Lube 3 - 3(5)	
Front Wheel Bearings	8	Inspect 12 - 12(20) Repack 24 - 24(40)	In the interest of safety and reliability it is advisable to have an authorized GM Dealer perform these operations.
Eng. Breather Filter (where fitted)	9	Clean 6-6(10)	Clean with petrol or kerosene. Oil with SAE 90 Straight-run Transmission Oil or SAE 50 Engine Oil.
Engine Oil Change (Filler and Dipstick)	9 & 17—All Exc. 350-V8 10 & 18 350-V8 Only	Change 3 - 3(5)	Drain when hot and refill with suitable grade of engine oil for the operating conditions. Be sure to check the oil level afterwards. (Refer to Pages 65 to 69 for information and approved grades).
Air Cleaner Paper Element	11	Inspect 6 - 6(10) Replace 24 - 24(40)	Visually check air cleaner element for restriction. Always use genuine GM replacement elements. 6 Cyl. H.D. units—Rinse foam element dry, re-oil & replace.
P.C.V. Valve— Serviceable Type	12	Clean 12 - 12(20)	Valve operation should be checked to see that it is not interfering with the normal running, particularly at engine idle, and also that it is able to allow proper flow of vapours and gases from the crankcase into the intake manifold. The correct procedure for the cleaning and re-assembly of the valve is contained in the appropriate Service Manual.
P.C.V. Valve— Replaceable Type	13	Check 12 - 12(20)	This type of P.C.V. Valve is not designed to be repaired or cleaned. If, after testing the effect on engine idling, as detailed in the appropriate Service Manual, a defect in the operation of the valve is suspected, the unit should be replaced immediately.
P.C.V. Intake Filter (350-V8 Only)	14	Replace 24 - 24(40)	The air filter for the crankcase ventilation system is located at the right rear of the air cleaner element housing and a tube connects the filter outlet to the right rocker cover.
Distributor (All Exc. 350-V8 Engines)	15	Lube 12 - 12(20)	Due to the procedures involved, it is best that an authorized GM Dealer perform these operations. Lubricate contact breaker by removing rotor button and lubricating felt pad with a few drops of light engine oil. Sparingly (equivalent to 2 match heads) lubricate contact breaker heel and cam lobes with heat resistant grease to MG-9 Specification.

CHASSIS MAINTENANCE CHART

Item	Number	Period	Instruction
Distributor Lubricator Wick (350-V8 Only)	**16**	**Reverse 12 - 12(20) Replace 24 - 24(40)**	An authorized GM Dealer is best equipped to carry out this function. Cam lubrication is carried out by a lubricator wick. The wick should be reversed, end for end if not being replaced. CAUTION: Never oil the wick.
Automatic Transmission Fluid Level (Dipstick)	**19**	**Check 3 - 3(5)**	*"DEXRON" brand automatic transmission fluid, identified also by a Part Number, should only be used for topping up or service refills. For an accurate fluid level check, drive the car several kilometres, making frequent starts and stops, to bring the transmission up to normal operating temperature. Park the car on a level surface, place selector lever in "Park", and leave the engine running. Remove dipstick, wipe clean, reinsert until the cap seats, remove and note reading. If fluid level is at or below the ADD mark, add sufficient fluid to raise the level to the FULL mark. One pint raises the level from ADD to FULL. Do not overfill. *Dexron is a registered trademark of General Motors Corporation.
Trimatic Transmission —Fluid Change —Band Adjustment	**20**	**Change & Adjust 24 - 24(40)**	Due to the associated operation of a **band adjustment** that is required at the time of a fluid change, it is necessary for an authorized GM Dealer to perform this operation.
Turbo-Hydramatic Transmission —Fluid Change —Filter Replacement	**21**	**Change & Replace 24 - 24(40)**	Due to the associated operation of a **filter change** that is required at the time of a fluid change, it is necessary for an authorized GM Dealer to perform this operation.
Brake Master Cylinder Fluid Level	**22**	**Check 3 - 3(5)**	Heavy duty high boiling brake fluid to GM 4653M — Type 450 Specification, must be used. Top up reservoirs to 1/8 in. below wall edge.
Engine Oil Filter (All Except 350-V8)	**23**	**Replace 6 - 6(10)**	Refer notes on Page 66 for details of oil filter capacity and checking oil level.
Engine Oil Filter (350-V8 Only)	**24**	**Replace 6 - 6(10)**	
Accelerator Linkage and Pivots	**25**	**Lube 6 - 6(10)**	Lubricate with a small quantity of grease to LG-2 Specification, all accelerator linkage points and pedal pivot.
Clutch Linkage (All Exc. 350-V8)	**26**	**Lube 6 - 6(10)**	Lubricate all clutch with molybdenum disulphide grease to Specification LG-5. Lubricate the clutch control rod where it passes through dash panel seal and grease to Specification LG-2.
Clutch Linkage (350-V8 Only)	**27**	**Lube 6 - 6(10)**	Lubricate all pivots and relay surface with molybdenum disulphide grease to Specification LG-5.
Transmission Control Linkage	**28**	**Lube 6 - 6(10)**	Lubricate all under-floor pivots and working surfaces with grease to LG-2 Specification after wiping and brushing application point.
Manual Transmission Oil (All Exc. 350-V8)	**29**	**Check 6 - 6(10)**	It is not necessary to drain the oil from the transmission except at overhaul. Therefore, only top up as required with oil to specification HN1046 multi-grade 80-90 viscosity.
Manual Transmission Oil (350-V8 Only)	**30**	**Check 6 - 6(10)**	NOT APPLICABLE TO STATESMAN.
Parking Brake System	**31**	**Lube 6 - 6(10)**	Lubricate cable guides, contact points at underbody, and equalizer attached to primary cable, with Grease to Specification LG-2. Lubricate the pivot pin and the top and bottom surfaces only of the pulley. DO NOT GREASE THE CABLE AT THIS LOCATION. Use grease to LG-2 Spec.
Rear Axle Oil Level	**32**	**Check 6 - 6(10)**	Check level, top up with multi-purpose Hypoid gear oil to Specification HN1187. For limited slip differential use only GM 9985035 oil.
Tyre Inflation Pressure	**33**	**Check 3 - 3(5)**	Reference should be made to Page 47 for the pressure recommended for various operating conditions and tyres.

SPECIFICATIONS

SERIAL NUMBERS

V.I.N. PLATE (Vehicle Identification No.)
Attached to the top shroud ledge of the dash panel on right (Driver's) side under engine hood. (Special Production Coding System.)

VEHICLE SERIAL No. (Chassis No.)
Stamped on a paint-free zone on top face of R.H. frame member at front end — access under engine hood.

BODY SERIAL NUMBER PLATE
Attached to the top ledge of the dash panel on left (Passenger's) side under the engine hood. Plate shows body styles, body serial number, paint and trim colour combination and paint number. Engine, Transmission, Axle Ratio Options — where used — Production No. is shown.

SAFETY COMPLIANCE PLATE (Not applicable to Export)
Attached to the top ledge of the dash panel on right (Driver's) side under the engine hood. Shows Vehicle Series, Model, Style, Month and Year of production, Vehicle Serial No., approved seating capacity.
Also, the Australian Design Rules to which the vehicle complies.

ENGINE NUMBER PREFIXES — SIX CYLINDER

*11QE — 173 cu. in. — 8.3 to 1 C.R.
*11QM — 202 cu. in. — 7.8 to 1 C.R.
11QL — 202 cu. in. — 9.4 to 1 C.R.

Stamped on pad above engine mounting on right hand (Driver's) side of engine.

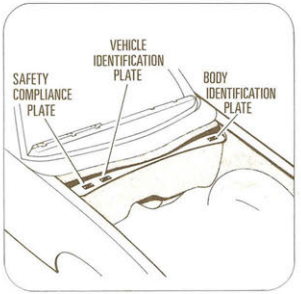
ENGINE NUMBER PREFIXES — EIGHT CYLINDER

*§11QS — 253 cu. in. — 8.0 to 1 C.R.
§11QR — 253 cu. in. — 9.0 to 1 C.R.
§11QT — 308 cu. in. — 9.0 to 1 C.R.
‡11QU — 350 cu. in. — 8.5 to 1 C.R.

§Stamped on pad on L.H. side (Passenger's side) at front of cylinder block above engine mounting.

‡Stamped on pad on R.H. side (Driver's side) front top of cylinder block in front of cylinder head.

*Export territories only.



Illustrated are the positions of three plates fitted for identification purpose.

MODEL RANGE & NUMBER

STATESMAN	DE VILLE	8 CYLINDER	81469
STATESMAN	CUSTOM	6 CYLINDER	81569
STATESMAN	CUSTOM	8 CYLINDER	81669

VEHICLE LOAD SPECIFICATION

Overloading or overspeeding may void your warranty.

Using tyres with a load capacity equivalent to or greater than those fitted as standard equipment and the appropriate tyre inflation pressures, the following maximum payloads are acceptable.

i.e. 900 lb. passenger load + 200 lb. luggage load = 1100 lbs.*

*The load specified does not vary where optional production items have been added to the vehicle.

VEHICLE DIMENSIONS (inches)

Refer Page 81 for Model Range details.

OVERALL LENGTH	198.0
OVERALL WIDTH	74.0
*OVERALL HEIGHT (LADEN)	
Custom	54.8
De Ville	54.5
WHEELBASE	114.0
TRACK — FRONT & REAR	60.2
*MINIMUM GROUND CLEARANCE (AT EXHAUST SYSTEM)	
Custom — L6	5.6
Custom — V8	5.9
Statesman de Ville	5.6

*@ 2/3 Maximum Load Specification

WARNING — OVERLOADING AND THE VEHICLE WARRANTY

Care should be taken to ensure that your vehicle is loaded in accordance with the recommendations in Section 12 of this Manual, otherwise the Warranty could be voided.

Overloading places an extra strain on the basic vehicle structure, as well as tyres, wheels, axles and suspension springs. Therefore, when carrying loads approaching the rated capacity of the vehicle, consideration should be given to vehicle speed in relation to the type of terrain or road conditions.

Additionally, abuse of the vehicle, particularly to engine and transmission (e.g. over-revving in intermediate gears), can seriously damage the power train and cause premature failure.

By observing these suggested rules for operating, you will avoid abuse of the vehicle, safeguard your investment and enjoy the privilege of the full warranty coverage.

ENGINES

SIX CYLINDER — IN-LINE BLOCK

Designation	173 L.C.	202 L.C.	202 H.C.
Compression Ratios	8.3 to 1	7.8 to 1	9.4 to 1
Cubic Capacity (cu. ins.)	173	202	202
Bore (ins.)	3.500	3.625	
Stroke (ins.)	3.000	3.250	
Horsepower — RAC Rating	29.40	31.54	
Horsepower — Max. Gross at Engine R.P.M.	112 at 4400	129 at 4400	135 at 4400
Torque (lbs./ft.) — Max. Gross at Engine R.P.M.	160 at 2000	190 at 2000	194 at 2000
Firing Order	Front to Rear — 1-5-3-6-2-4		
Cylinder Numbering	Front to Rear — 1-2-3-4-5-6		

EIGHT CYLINDER — VEE BLOCK

Designation	253 L.C.	253 H.C.	308 H.C.	350 H.C.
Compression Ratios	8.0 to 1	9.0 to 1	9.0 to 1	8.5 to 1
Cubic Capacity (cu. ins.)	253	253	308	350
Bore (ins.)	3.625		4.000	4.000
Stroke (ins.)	3.062		3.062	3.480
Horsepower — RAC Rating	42.05		51.20	51.20
Horsepower — Max. Gross at Engine R.P.M.	174 at 4400	185 at 4400	240 at 4800	275 at 4800
Torque (lbs./ft.) — Max. Gross at Engine R.P.M.	247 at 2400	262 at 2400	315 at 3000	360 at 3200
Firing Order and Cylinder Numbering	253 and 308 Engines: Firing Order: 1-2-7-8-4-5-6-3 Numbering (Front to Rear) — L.H. Bank: 2-4-6-8 R.H. Bank: 1-3-5-7			
	350 Engine — Firing Order: 1-8-4-3-6-5-7-2 Numbering (Front to Rear) — L.H. Bank: 1-3-5-7 R.H. Bank: 2-4-6-8			

CAPACITIES (Imperial Measure)

SIX CYLINDER (Pints)

Engine Oil — Service Refill — 6.0 (b)
— Add for filter — 1.5 (b)

EIGHT CYLINDER (Pints)

Engine Oil — Service Refill — 7.0 (b)
— Add for filter — 1.5 (b)

TRANSMISSIONS — MANUAL (Pints)

3 Speed — 3.40
4 Speed — 3.40

TRANSMISSIONS — AUTOMATIC (Pints)

Refer to Page 80 for instructions to finally check level of fluid.

ITEM	Turbo-Hydramatic	Trimatic
6 Cyl. Service Refill		
— Drain Plug Removed	Not Applic.	3.0 (b)
— Fluid Pan Removed	Not Applic.	4.0 (b)
— Dry (as at Overhaul)	Not Applic.	10.7 (a)+(b)
8 Cyl. Service Refill		
— Drain Plug Removed	Not Applic.	3.0 (b)
— Fluid Pan Removed	6.5 (b)	4.0 (b)
— Dry (as at Overhaul)	18.3 (a)+(b)	15.3 (a)+(b)

(a) = Only at overhaul.
(b) = Use oil level indicator for final check.

COOLING SYSTEM (Pints — Approximate)

6 Cylinder (All) Engines — 14
8 Cylinder 253 Engine — 21
8 Cylinder 308 Engine — 20
8 Cylinder 350 Engine — 26

REAR AXLES — LIMITED SLIP DIFF. INCL. (Pints)

Banjo Type (Sealed Back) — 2.5 (a)
Salisbury Type (Removable Back) — 2.5 (a)

FUEL TANK CAPACITY: 14.5 gallons — All models

CLEARANCES AND SETTINGS

ENGINE TYPE	6 Cyl.	8 Cyl.	
ENGINE CAPACITY	173/202	253/308	350
DISTRIBUTOR			
Point Opening—			
Bosch — 173/202	.016-.020	.013-.018	—
Delco Remy	—	—	.019
*Cam Angle Dwell—			
Bosch	30°-35°	26°-30°	—
Delco Remy	—	—	29°-31°
***Preferred reading to Point Opening**			
SPARK PLUG GAP	.035" — All Engines		

(Refer to Section 10 for further information on plug types.)

The mixture control of the carburettor has been sealed and the idling speed set to comply with the Australian Design Rules. The reason for this is to conform to anti-pollution measures.

Your GM Dealer has the full information concerning the foregoing.

FUSES

*Subject to model or option selected — Refer Page 76 for illustration of Fuse Block.

THE FUSE BLOCK IS LOCATED UNDER THE INSTRUMENT PANEL ON THE RIGHT OF THE STEERING COLUMN.

Device or Circuit Protected	Feed Control	Fuse No. & Capacity
Turn Signal Windshield Washer Windshield Wiper *Power Antenna	'ACC' or 'ON' on Ignition Switch	3AG or AGC 15 amps.
Instrument Lights *Auto Trans. Console Indicator Light	'ON' on light Switch	1AG or AGA 3 amps.
Cigarette Lighter *Clock Instrument Panel Compartment Light	Battery	3AG or AGA 15 amps.
Brake Warning Light *Power Operated Window Relay Back-up Lamps Gauges Instrument Panel Indicators	'ON' on Ignition Switch	3AG or AGC 15 amps.
Licence Plate Lamp Tail Lamps	'ON' on light Switch	3AG or AGC 15 amps.
Stop Lamps Horns Interior Courtesy Lamps Luggage Compartment Lamp	Battery	3AG or AGC 15 amps.
*Radio	'ACC' or 'ON' on Ignition Switch	1AG or AGA 3 amps.
Heater/Demister *(Also Air Conditioner when fitted)	'ACC' or 'ON' on Ignition Switch	3AG or AGC 15 amps. 25 amps. if A/C fitted
Head Lamps	Battery	15 amp. Circuit Interruptor
Window Lift	Circuit Breaker	40 amp. cap. before opening
Heated Rear Window (Spare Fuse Position)	'ON' on Ignition Switch	15 amps.

HEADLAMPS

Refer Page 76 for Circuit Interruptor.

4 Lamp System (5.75 in. units)	GMH Part No.	Trade Part No.	Watts Rating
INNER	7439863	—	50.0
OUTER	2820561	—	37.5/50

BULB SPECIFICATIONS

Location	GMH Part No.	Trade Part No.	Bulb Rating
Front Turn Signal (Double Filament)	9417867	1157	4-32 C.P.
Parking (Front)	9421330	194	2 C.P.
Tail and Stop (Double Filament)	9417867	1157	4-32 C.P.
Rear Turn Signal and Back-up	9417866	1156	32 C.P.
Headlamp Hi-Beam Indicator	9421330	194	2 C.P.
Instrument Panel	9421330	194	2 C.P.
Temp., Oil Pressure and Gen. Tell-tale	9421330	194	2 C.P.
Dome Lamp	9414045	211	12 C.P.
Option	9422525	211/1	12 C.P.
Turn Signal Tell-tale	9421330	194	2 C.P.
Licence Plate	SP-1467	989	6 watt
Instrument Panel Compartment	9417863	1895	2 C.P.
Brake Warning Tell-tale	9421330	194	2 C.P.
Luggage Compartment	455490	1003	15 C.P.
Automatic Trans. Selector (Console)	9417863	1895	2 C.P.
Front Pass. Compartment Foot Well — L.H. and R.H.	SP-1467	989	6 watt
Rear Pass. Quarter-Corners — L.H. and R.H.	SP-1932	—	5 watt
Rear Quarter Side-Marker Lamps	9417863	1895	2 C.P.

N.B. Some of the bulbs listed are subject to model or option selection.

QUEENSLAND—METROPOLITAN DEALERS

ALBION
Harrison Car Sales,
Cnr. Frodsham Street and Crosby Road

MARGATE
Margate Motors (J. A. Page) Pty. Ltd.,
277 Oxley Avenue

MOOROOKA
John Sivyer Pty. Ltd.,
1060 Ipswich Road

MT. GRAVATT
Zupps Motors Pty. Ltd.,
1310 Logan Road

NEWSTEAD
Eagers Retail Pty. Ltd.,
95 Breakfast Creek Road

NEWSTEAD
Eagers (Trucks),
Evelyn Street

NUNDAH
Eagers (Northside),
Cnr. New Sandgate Road and Wood Street

OXLEY
Barkly Motors (Oxley) Pty. Ltd.,
2193 Ipswich Road

STONES CORNER
Leach Motors Southside,
456 Logan Road

TOOWONG
Eagers (Westside),
557-567 Coronation Drive

WINDSOR
Leach Motors,
Newmarket Road

WOOLLOONGABBA. South Brisbane
Eagers (Southside),
Cnr. Logan Road and Trafalgar Street

WYNNUM
G. & B. Motors,
200 Tingal Road

AUTHORISED GM DEALERS

QUEENSLAND—COUNTRY DEALERS

ALLORA
ATHERTON
AUGATHELLA
AYR
BARCALDINE
BEAUDESERT
BEENLEIGH
BEERWAH
BIGGENDEN
BILOELA
BLACKALL
BOLLON
BOWEN
BUNDABERG
CABOOLTURE
CAIRNS
CHARTERS TOWERS
CHINCHILLA
CLERMONT
CLEVELAND
CLONCURRY
COOLANGATTA
COOROY
CUNNAMULLA
DALBY
DIRRANBANDI
EMERALD
GATTON
GAYNDAH
GLADSTONE
GOONDIWINDI
GYMPIE
HOME HILL
HUGHENDEN
INGHAM
INGLEWOOD
INNISFAIL
IPSWICH
JANDOWAE
JULIA CREEK
KENILWORTH
KILCOY
KINGAROY
LAIDLEY
LONGREACH
MACKAY
MAREEBA
MARYBOROUGH
MILES
MITCHELL
MONTO
MORVEN
MT. ISA
MT. PERRY
MURGON
NAMBOUR
NANANGO
PETRIE
PROSERPINE
QUILPIE
RICHMOND
ROCKHAMPTON
ROMA
SOUTHPORT
SPRINGSURE
STANTHORPE
ST. GEORGE
TARA
TEXAS
THEODORE
TOOWOOMBA
TOWNSVILLE
TULLY
WARWICK
WINTON
WOODFORD
YULEBA

AUTHORISED GM DEALERS

NEW SOUTH WALES—METROPOLITAN DEALERS

ARNCLIFFE
Suttons Motors (Arncliffe) Pty. Ltd.,
93 Princes Highway

ASHFIELD
Muirs Motors (Ashfield) Pty. Ltd.,
252 Parramatta Road

AUBURN
Sturgess-Hall Pty. Ltd.,
235 Parramatta Road

BALGOWLAH
Inder Motors Pty. Ltd.,
164-174 Condamine Street

BANKSTOWN
Boyded Pty. Limited,
236-242 South Terrace

BANKSTOWN
Ern Jones Pty. Limited,
350-356 Hume Highway

BLACKTOWN
Mitchell & Townsend,
Main Street

CABRAMATTA
Ron Hodgson Cabramatta Pty. Ltd.,
266 Hume Highway

CAMPBELLTOWN
Clintons Motors Pty. Ltd.,
3-17 Queen Street

CAMPERDOWN
John A. Gilbert Pty. Ltd.,
36-38 Parramatta Road

CHATSWOOD
Sundell Motors Pty. Ltd.,
821-843 Pacific Highway

CHULLORA
Suttons Motors (Chullora) Pty. Ltd.,
Cnr. Hume Highway & Waterloo Road

CROW'S NEST
J. N. Caldwell (Holdings) Pty. Ltd.,
1 Alexander Street

DEE WHY
Norman G. Booth (Dee Why) Pty. Ltd.,
Cnr. May and Mooramba Roads

HOMEBUSH
Gilbert & Roach Pty. Ltd.,
187 Parramatta Road

HOMEBUSH
Suttons Motors (Homebush) Pty. Ltd.,
112 Parramatta Road

HURSTVILLE
Savell Bros. Pty. Ltd.,
412 Forest Road

KINGSFORD
John Pellegrini Motors Pty. Ltd.,
269 Anzac Parade

KINGSWOOD
Max Wright Motors Pty. Ltd.,
107-119 Great Western Highway

LAKEMBA
H. M. Hunt Motors Pty. Ltd.,
817 Canterbury Road

LIVERPOOL
A. C. McGrath & Company,
165-191 Macquarie Street

LIVERPOOL
Pat Cullen's Garage,
324-360 Hume Highway

MIRANDA
W. H. Lober (Miranda) Pty. Ltd.,
1-3 Kiora Road

MOSMAN
Norman G. Booth Pty. Ltd.,
501 Military Road

NEWPORT BEACH
Sundell Motors Pittwater Pty. Ltd.,
Barrenjoey Road

PADSTOW
Ken Sams Motors,
19 Davies Road

PARRAMATTA
Fair Deal Car Sales (Parramatta),
65 Church Street

PARRAMATTA
Hillsdon's Pty. Ltd.,
87 Church Street

PENNANT HILLS
L. W. Vagg & Co. Pty. Ltd.,
351-355 Pennant Hills Road

PETERSHAM
Suttons Motors (Petersham) Pty. Ltd.,
654 Parramatta Road

RANDWICK
Boyded (Randwick) Pty. Ltd.,
265 Avoca Street

ROCKDALE
C. V. Holland Pty. Ltd.,
571 Princes Highway

ROSE BAY
Vern Potts,
505-509 Old South Head Road

RUSHCUTTERS BAY
W. H. Lober & Co. Pty. Ltd.,
49 McLachlan Ave.

RYDE
Muirs Motors (Ryde)
603-605 Victoria Road

ST. MARY'S
Lance Motors Pty. Ltd.,
412 Western Highway

WAITARA
John A. Gilbert (Northside) Pty. Ltd.,
90 Pacific Highway

WINDSOR
Hawkesbury Valley Motors,
George Street

AUTHORISED GM DEALERS

NEW SOUTH WALES—COUNTRY DEALERS

ADELONG
ALBURY
ARDLETHAN
ARMIDALE
BALLINA
BARADINE
BARELLAN
BARHAM
BARRABA
BATHURST
BEGA
BELLINGEN
BELMONT
BLAYNEY
BOGGABRI
BOMBALA
BOOROWA
BOURKE
BOWRAL
BREWARRINA
BROKEN HILL
BULAHDELAH
CANOWINDRA
CASINO
CESSNOCK
COBAR
COFF'S HARBOUR
COLLARENEBRI
CONDOBOLIN
COOLAH
COOLAMON
COOMA
COONABARABRAN
COONAMBLE
COOTAMUNDRA
COROWA
COWRA
CROOKWELL
CULCAIRN
DENILIQUIN
DORRIGO
DUBBO
DUNGOG
EDEN
EUGOWRA
FINLEY
FORBES
GANMAIN
GILGANDRA
GLEN INNES
GLOUCESTER
GOSFORD
GOULBURN
GRAFTON
GRENFELL
GRIFFITH
GULARGAMBONE
GUNDAGAI
GUNNEDAH
GUNNING
GUYRA
HARDEN
HAY
HILLSTON
HOLBROOK
INVERELL
JERILDERIE
JUNEE
KANDOS
KATOOMBA
KEMPSEY
KIAMA
KURRI KURRI
KYOGLE
LAKE CARGELLIGO
LEETON
LISMORE
LITHGOW
MACKSVILLE
MAITLAND
MILTON
MOLONG
MOREE
MORUYA
MOSS VALE
MUDGEE
MULLUMBIMBY
MUNGINDI
MURWILLUMBAH
MUSWELLBROOK
NARRABRI
NARRANDERA
NARROMINE
NEWCASTLE
NOWRA
NYNGAN
ORANGE
PARKES
PEAK HILL
PICTON
PORT MACQUARIE
QUEANBEYAN
QUIRINDI
SCONE
SINGLETON
SPRINGWOOD
TAMWORTH
TAREE
TEMORA
TENTERFIELD
TORONTO
TOTTENHAM
TRANGIE
TRUNDLE
TULLAMORE
TUMBARUMBA
TUMUT
TWEED HEADS
UNGARIE
WAGGA
WALCHA
WALLA WALLA
WALGETT
WARIALDA
WARREN
WAUCHOPE
WELLINGTON
WEST WYALONG
WINGHAM
WOLLONGONG
WOODENBONG
WYONG
YASS
YOUNG

AUSTRALIAN CAPITAL TERRITORY—DEALERS

CANBERRA (SUBURBAN LOCATIONS)
FYSHWICK — PHILLIP — BARTON

AUTHORISED GM DEALERS

VICTORIA—METROPOLITAN DEALERS

BENTLEIGH
Boyanton Wray Pty. Ltd.,
280 Centre Road

BERWICK
Noel Gould Pty. Ltd.,
Princes Highway

BOX HILL
Southern Motors Box Hill Pty. Ltd.,
889 Whitehorse Road

BURWOOD
H. C. Dusting & Co. Pty. Ltd.,
314 Toorak Road

CAULFIELD
Booran Motors Pty. Ltd.,
1049 Glenhuntly Road

CHELSEA
Ron Morphy Motors,
370 Nepean Highway

CHELTENHAM
Mentone Motors (1964) Pty. Ltd.,
1214 Nepean Highway

DANDENONG
Bill Patterson—Cheney Dandenong Pty. Ltd.,
141 Lonsdale Street

DANDENONG
Market Motors (Dandenong) Pty. Ltd.,
16 Princes Highway

ELSTERNWICK
Reg. Hunt Motors Pty. Ltd.,
77 Nepean Highway

ESSENDON
Preston Motors (Essendon) Pty. Ltd.,
207-211 Keilor Road

FAWKNER
Bill Patterson Fawkner Pty. Ltd.,
1263 Sydney Road

FERN TREE GULLY
Neilson Motors Pty. Ltd.,
Burwood Road

FOOTSCRAY
Preston Motors (Footscray) Pty. Ltd.,
435 Barkly Street

FRANKSTON
Bayside Motors,
54 Playne Street

GREENSBOROUGH
Watsons of Greensborough,
108 Main Street

HASTINGS
McRaes of Hastings,
762 Hastings Road

IVANHOE
Dillon's of Ivanhoe,
52 Lower Heidelberg Road

LILYDALE
Peter Robinson Motors,
Main Street

MELBOURNE
Rhodes Motor Co. Pty. Ltd.,
577 King Street

MORNINGTON
Barry Sheales Pty. Ltd.,
Main Street

NORTH MELBOURNE
Southern Motors Pty. Ltd.,
19 Flemington Road

OAKLEIGH
Garry & Warren Smith Pty. Ltd.,
1575 Dandenong Road

PRESTON
Campbell's Motors Pty. Ltd.,
518 High Street

RICHMOND
Kevin Dennis Motors (New) Pty. Ltd.,
309-313 Bridge Road

RINGWOOD
Bill Patterson Ringwood Pty. Ltd.,
45-57 Maroondah Highway

SOUTH MELBOURNE
Bill Patterson—Cheney Melbourne Pty. Ltd.,
16-50 Sturt Street

SOUTH MELBOURNE
Preston Motors Pty. Ltd.,
132 Sturt Street

SPRINGVALE
Blanchard Motors Pty. Ltd.,
Princes Highway

SUNSHINE
Kevin Dennis Motors (Western) Pty. Ltd.,
272 Ballarat Road

WARRANDYTE
Lloyd Holycak Motors Pty. Ltd.,
Yarra Street

WERRIBEE
Fisher Motors Pty. Ltd.,
169 Watton Street

YARRAVILLE
W. H. & S. Massey Pty. Ltd.,
377 Williamstown Road

AUTHORISED GM DEALERS

VICTORIA—COUNTRY DEALERS

ALEXANDRA
ARARAT
BACCHUS MARSH
BAIRNSDALE
BALLARAT
BENALLA
BENDIGO
BERRIWILLOCK
BIRCHIP
BOORT
CAMPERDOWN
CASTERTON
CASTLEMAINE
CHARLTON
COBRAM
COHUNA
COLAC
COLERAINE
CORRYONG
DAYLESFORD
DERRINALLUM
DIMBOOLA
DONALD
DROUIN
ECHUCA
EUROA
FOSTER
GEELONG
HAMILTON
HEALESVILLE
HEATHCOTE
HOPETOUN
HORSHAM
JEPARIT
KANIVA
KERANG
KOOWEERUP
KORUMBURRA
KYABRAM
KYNETON
LANG LANG
LEONGATHA
MAFFRA
MANSFIELD
MARYBOROUGH
MILDURA
MINYIP
MOE
MOOROOPNA
MORTLAKE
MORWELL
MURRAYVILLE
NAGAMBIE
NATHALIA
NHILL
NULLAWIL
NUMURKAH
NYAH
ORBOST
OUYEN
PORTLAND
PYRAMID HILL
QUAMBATOOK
RAINBOW
ROCHESTER
RUTHERGLEN
SALE
SEA LAKE
SEYMOUR
SHEPPARTON
ST. ARNAUD
STAWELL
SWAN HILL
TALLANGATTA
TERANG
TIMBOON
TRARALGON
UNDERBOOL
WANGARATTA
WARBURTON
WARRACKNABEAL
WARRNAMBOOL
WATCHUPGA
WONTHAGGI
WYCHEPROOF
YALLOURN
YARRAM
YARRAWONGA
YEA

TASMANIA—METROPOLITAN & COUNTRY DEALERS

HOBART — **Nettlefold Car & Truck Pty. Ltd.,**
179 Macquarie Street

HOBART — **Motors Pty. Ltd.,**
179 Macquarie Street

BURNIE — **Motors Pty. Ltd.,**
Mount Street

DELORAINE — **Creese & Faulkner,**
Church Street

DEVONPORT — **Motors Pty. Ltd.,**
24 Best Street

HUONVILLE — **Motors Pty. Ltd.,**
Main Street

KING ISLAND — **King Island Motors,**
Currie

LAUNCESTON — **Motors Pty. Ltd.,**
165 Brisbane Street

LAUNCESTON — **Nettlefold Car & Truck Pty. Ltd.,**
71 Bathurst Street

QUEENSTOWN — **D. Dilger,**
Cutten Street

SMITHTON — **Smithton Motors Pty. Ltd.,**
16 Nelson Street

ULVERSTONE — **Motors Pty. Ltd.,**
99 Reibey Street

AUTHORISED GM DEALERS

SOUTH AUSTRALIA—METROPOLITAN DEALERS

ADELAIDE
Citystate Motors Pty. Ltd.,
43-69 Sturt Street

ADELAIDE
Freeman Motors Limited,
126 Rundle Street

ADELAIDE
United Motors Limited,
62-72 Franklin Street

EDWARDSTOWN
Coventry Motors Pty. Ltd.,
1023-1029 South Road

ELIZABETH
Peter Page Pty. Ltd.,
Elizabeth Way

GAWLER
John Doran Pty. Ltd.,
48 Murray Street

MALVERN
Claridge Motors Pty. Ltd.,
361-367 Unley Road

MORPHETT VALE
Lyn-Don Motors Pty. Ltd.,
335-345 Main South Rd.

PORT ADELAIDE
Smith Motor Co. Pty. Ltd.,
171 Commercial Road

SOMERTON PARK
John H. Ellers Pty. Ltd.,
282-286 Brighton Road

SOUTH AUSTRALIA—COUNTRY DEALERS

ARDROSSAN
BALAKLAVA
BERRI
BORDERTOWN
BRINKWORTH
BURRA
CLARE
CLEVE
CRYSTAL BROOK
CUMMINS
EUDUNDA
GLADSTONE
JAMESTOWN
KADINA
KEITH
KIMBA
KINGSCOTE
KINGSTON
LAMEROO
LOXTON
McLAREN VALE
MAITLAND
MALLALA
MANNUM
MENINGIE
MILLICENT
MT. BARKER
MT. GAMBIER
MURRAY BRIDGE
NARACOORTE
NILDOTTIE
ORROROO
PETERBOROUGH
PINNAROO
PORT AUGUSTA
PORT LINCOLN
PORT PIRIE
QUORN
RENMARK
SADDLEWORTH
SEDAN
STRATHALBYN
STREAKY BAY
TANUNDA
TWO WELLS
VICTOR HARBOR
WAIKERIE
WHYALLA
WOOMERA
WUDINNA
YANKALILLA
YORKETOWN

NORTHERN TERRITORY—DEALERS

ALICE SPRINGS
Kittle Bros. (Alice Springs) Pty. Ltd.,
Wills Terrace

DARWIN
Suttons Motors (Darwin) Pty. Ltd.,
Cnr. Mitchell and Knuckey Streets

TENNANT CREEK
Kittle Bros. Tennant Creek Pty. Ltd.,
Patterson Street

AUTHORISED GM DEALERS

WESTERN AUSTRALIA—METROPOLITAN DEALERS

BELMONT
Major Motors Pty. Ltd.,
225 Great Eastern Highway

CANNINGTON
Kevin James Pty. Ltd.,
1308 Albany Highway

FREMANTLE
Shack Motors,
59 Queen Victoria Street

GOSNELLS
Lance Gibbons Pty. Ltd.,
2327 Albany Highway

MELVILLE
Melville Motors (1969) Pty. Ltd.,
532-536 Canning Highway

MIDLAND
Webster Motors Pty. Ltd.,
37 Great Northern Highway

MORLEY
Metro Motors Pty. Ltd.,
212 Walter Road

NAVAL BASE
Shack Motors (Cockburn),
33 Burlington Street

OSBORNE PARK
City Motors, Scarborough Pty. Ltd.,
Cnr. Scarborough Beach Rd. & Harbourne St.

PERTH
Attwood Motors Pty. Ltd.,
22 Stirling Street

PERTH
City Motors Pty. Limited,
505 Newcastle Street

PERTH
Sydney Atkinson Motors Limited,
20 Terrace Drive

VICTORIA PARK
Young's W.A. Pty. Ltd.,
529 Albany Highway

WESTERN AUSTRALIA—COUNTRY DEALERS

ALBANY
BEVERLEY
BODDINGTON
BOYUP BROOK
BRIDGETOWN
BROOKTON
BROOME
BRUCE ROCK
BUNBURY
BUSSELTON
CARNAMAH
CARNARVON
COLLIE
CORRIGIN
CRANBROOK
DALWALLINU
DERBY
ESPERANCE
EXMOUTH
GERALDTON
GNOWANGERUP
GOOMALLING
HARVEY
KALGOORLIE
KAMBALDA
KARRATHA
KATANNING
KELLERBERRIN
KULIN
KUNUNURRA
MANJIMUP
MERREDIN
MOORA
MT. BARKER
MT. MAGNET
MULLEWA
NAREMBEEN
NARROGIN
NORTHAM
PINGELLY
PINJARRA
PORT HEDLAND
QUAIRADING
SOUTHERN CROSS
WAGIN
WAROONA
WONGAN HILLS
WYALKATCHEM
WYNDHAM

SECTION—14

INDEX

Air Conditioning .. 42
Ash Trays .. 19
Battery .. 73
Brake Operation .. 35-36
Brakes — Driving Cautions .. 35
Brake Fluid .. 35
Bulbs — Removal .. 74-75
Bulbs — Specification .. 86
Choke — Manual Control .. 26, 30
Cigar Lighter .. 27
Cleaning of Interior .. 59-60
Cleaning of Exterior .. 61-63
Cooling System .. 71-72
Courtesy Equipment .. 19
Dealers — Authorised .. 87-94
Emergency Conditions .. 38
Engine Lubrication Notes .. 65
Engine Oil — Capacities .. 84
— Maintaining Level .. 66
— Filter Replacement .. 66
— Consumption .. 67
— Change Intervals .. 68
— Viscosity Recommendations .. 69
Exhaust Gas Warning .. 44
Fusible Link .. 4
Fuses & Circuit Interruptor .. 76, 85
Gauges .. 24
Guardian Maintenance .. 7
Headlamp Specification .. 85
Heater-Demister .. 41
Heated Rear Window .. 18
Horns .. 27
Indicator Lights (Instrument Panel) .. 24-25
Jack Operation .. 53
Keys .. 10
Lighting Controls .. 26
Limited Slip Differential .. 37
Locks — Doors .. 4, 11
— Ignition/Steering .. 10
— Instrument Panel Compartment .. 11
— Engine Hood .. 11
— Petrol Cap .. 11
— Luggage Compartment .. 11
Loose Load and Articles .. 4
Lubrication — Body and Chassis .. 77-80
Model Range .. 81
Owner Relations .. 8
Overloading and the Vehicle Warranty .. 82
Petrol Correct Grade .. 28
Petrol Fumes .. 44
Polishing .. 62-63
Radio .. 27
Rear Vision Mirrors .. 17

Running-in Procedure .. 29
Safety Features .. 5
Safety Index .. 3
Safety Glass .. 19
Seats — Adjustment of Front .. 12
— Headrestraint .. 13
— Repositioning .. 13
Seat Belts .. 14-16
Spare Wheel Stowage .. 50-52
Spark Plugs .. 76
Serial Numbers and Locations .. 81
Specifications — Vehicle Load and Dimensions .. 82
— Engine .. 83
— Capacities and Clearances .. 84
— Fuses and Headlamps .. 85
— Bulbs .. 86
Starting Procedure .. 30
Steering — Power .. 37
Superlift Shock Absorbers .. 49
Tools .. 50
Trailer and Caravan Hauling — Loads .. 56
— Driving Hints .. 57
Transmission Operation — Manual .. 31-32
— Automatic .. 33-34
Turn Signal Operation .. 25
Tyres — Valve Caps .. 45
— General Notes .. 46
— Retreads and Heavy Treads .. 46
— Inflation Pressures .. 47
— Fast Motoring .. 48
— Rotation .. 49
Vehicle Load Specifications .. 47, 82
Vehicle Pre-Delivery .. 6
Ventilation — Flow Through System .. 40
— Dusty Conditions .. 43
— Exhaust Gases .. 44
Warranty Protection .. 6, 82
Washing .. 62
Wheel Changing .. 53
Wheel Trim Removal .. 50
Window Controls — Manual & Power Operated .. 18
Windshield Notes .. 70
Windshield Wipers and Washer .. 18, 26-27
Wiring Harness — Fusible Link .. 4

PREVENTING THE THEFT OF YOUR AUTOMOBILE OR ITS CONTENTS

Your automobile is a valuable piece of property which should be carefully guarded. The Police Departments in the respective States are endeavouring to protect your property. Your help is needed, and your attention to the following suggestions is solicited:

1. **Make sure your ignition key is removed when leaving your vehicle unattended, even in your own garage.**
2. **Close all windows and lock all doors when your vehicle is not in use.**
3. **Do not leave valuables in your vehicle, where they will be easily seen and may attract unwarranted attention.**
4. **Never leave valuables or personal belongings in your vehicle overnight.**

COPYRIGHT — GENERAL MOTORS-HOLDEN'S SALES PTY. LTD.
(Reproduction in whole or part is prohibited without written approval.)
A 'HOLDEN' Publication
Printed in Australia by G. W. Green Printers, Melbourne